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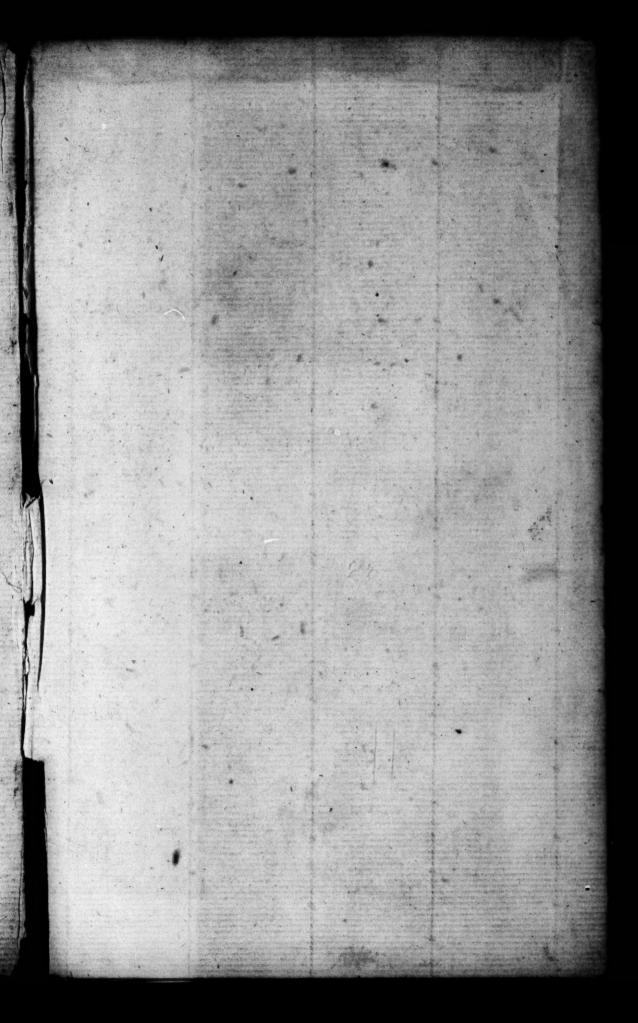
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### LETTER

T O

WILLIAM SMELLIE, M.D.

Containing CRITICAL and PRACTICAL

#### REMARKS

Upon his TREATISE on the

THEORY and PRACTICE of MIDWIFERY.

By JOHN BURTON, M.D. C

Wherein the various

Gross Mistakes and dangerous Methods of Practice

Mentioned and recommended by that Writer,

Are fully demonstrated and generally corrected.

Likewise the several Advantages or Dangers, to both Motner and Child, attending the Turning the last in the Womb to extract by the Feet, or that accrue from the Use of each particular Kind of Instrument, employ'd in delivering Women, are shewn in a more ample Manner than heretofore.

Being as an APPENDIX, to both the above-mentioned Authors Treatifes on Midwifery; absolutely necessary to be perused by all who have read the former's Book, or attended his Lectures with a View to Practice.

To which is affixed a COPPER-PLATE, representing several Sorts of Instruments used by the Ancients, with the Fillet as improved by the Author thereof.

#### LONDON:

Printed for W. Owen at Homer's Head, Temple-Bar.
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#### READER.

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IN the following Remarks upon Dr. Smellie's Treatise on the Theory and Practice of Midwisery, I have confidered that Author in several Lights, as an historical Writer, as an Anatomist, as a Theorist, and a Letturer or Practitioner.

First then, as an historical Writer be tells us in his Preface (a), that 'The Introduction contains a fummary Account of the Practice of Midwifery, both among the Ancients and Moderns, with the Improvements which bave been bitherto made in it; and this be bas exhibited for the Information of those who have not Time or Opportunity to peruse the Books from which it is collected; that by seeing at once the whole Extent of the Art, they may be more able to judge for themselves, and regulate their Practice by those Authors, who have written most judiciously upon the Subject. And in the Introduction (b) be says, ' He shall give a short detail of the Practice of Midwifery, with the Improvements which have been made in it, at different Times; as be bad been able to collect the Circumstances from those Authors, ancient as well as modern, who have written on the Subject."

(a) P. z. (b) P. I.

Hence a candid Reader would imagine, first, That Smellie must have read a great many Authors both ancient and modern, to enable him to make these Extrasts.

Secondly, That they are to enable the Readers to 'judge' for themselves and regulate their Practice by those Authors, who have written most judiciously upon the Sub-

· jett.

As to the first, I shall shew that there was no occasion to have perused the Originals quoted, since the pretended Extracts, or the Places they are said to be taken from, may be seen in one single folio Volume collected by Spachius from Hippocrates's Time (When Smellie begins his Account) down to Guillemeau, who published in 1582; a few Lines out of Le Clerc and Friend's History of Physic excepted. Hence no great Time was requisite to read the Parts whence they are pretended to be collected.

Secondly. It appears that Smellie has never read either the Originals or Spachius, or else did not understand them, or bas wilfully misrepresented their Meaning to countenance some dangerous Methods of Practice. Otherways it is impossible to account for the representing some of those Authors as laying down Rules or Methods of Practice, directly the Reverse of what is to be found in their Works. For my own Part I should rather have imagined, that as Smellie had employ'd one Person to model or draw bis Book up in the Form it has appeared, so be might bave fet another Man to copy or make Extracts for him out of Spachius, who had neither understood the Subject. nor the Language of the Authors quoted, had not those pretended Extracts been brought to give a Sanction, or to authorize Smellie's Method of proceeding; because thereby bis Readers were to judge and regulate their Practice. Hence it was absolutely necessary that his Readers and Pupils should be properly informed thereof, to avoid the fatal Mischiefs that must of consequence ensue, if those Methods thould be put into Execution.

Listes

that

Thirdly, It is evident that Smellie is so far from giving a regular Series of Things beneficial in Practice, that from 1597 (the Date of the last Edition of Spachius) to 1668, (when Mauriceau printed his Midwifery) he has taken no Notice of any Author; seemingly for want of another Collector like Spachius; because there are many Writers during that Interval of Time, who have published several Things in the various Branches of these Studies, more useful than many of those that Smellie takes notice of, many of which I have named, in order to fill up, in some measure, that great Chasm betwiet the Times above-mentioned.

Lastly, Our Author has not given (as he pretends) an Account of the Improvements that have been hitherto made in the Practice of Midwisery amongst even the Moderns; ending with Mesnard's Treatise published in 1743, at Paris, altho' his own Book was not published till 1752. I can't omit observing, that quite thro' Smellie's Book there seems to be an Affectation of deviating from every Author, altho' even in Trisles; but more particularly where they have been universally applauded for any Methods or Observations they had made. Thus he endeavours to lessen the Merit of Deventer, La Motte, Ruysch, &c. all which are mentioned in the following Remarks, where those Writers are vindicated.

In the next Place I have considered Dr. Smellie as an Anatomist; who has laid it down as a Rule (c), That those who intend to prastise Midwisery, ought first of all to make themselves Masters of Anatomy; in which, I believe, every Accoucheur will agree with him. But he is so far from giving Proofs of his being thus qualified, that he has brought himself into this Dilemma, either of owning his Ignorance in that Branch, so necessary to be understood, or that knowing better, he yet wilfully gave a wrong Description of the Parts proper to be known For I don't believe there is one modern Writer, who pretends to give the least anatomical Relation of the Parts,

that abounds with so many Defects, or with such false. Accounts, Part of that of the Pelvis excepted; and althe bis Description of this last is pretty accurate, yet in Some Respects be is wrong, especially in some Parts of bis Theory that he builds thereon. From all which it is evident, that Smellie's Pupils or Readers (Supposing them to have no better Instructions) must not only be very deficient in the Knowledge of that Part of Anatomy, but

must be greatly misled.

Thirdly, I consider Smellie as a Theorist. In one Place (d) be says, 'Theory is but of little Service towards afcertaining the Diagnostics and Cure of Diseases, or improving the Practice of Midwifery.' In another Part (e) be Jays, That Theory is the Means of introducing more valuable Discoveries; and as a Proof thereof, be shews in several Places (f) the good Effects arising from Theory, as well in others as himself; all which Contradictions and Inconsistences are remark'd in their proper Places.

Fourthly and lastly, In the Light of a Lecturer and Practitioner I have examined all his Methods of Practice; and where I judged it wrong, or knew a better Method. I have given my reasons for so doing; and have fet forth my own Practice more fully, with my Motives in support of it: All which are laid before the intelligent

and candid Reader, who must judge betwixt us.

As Smellie feems fo defirous of introducing bis favourite Instrument the Forceps into a more general Practice than I am certain is necessary, I was obliged to shew the Advantages and Dangers that attend the turning a Child in the Womb with a View to extract it by the Feet, in a fuller and more conspicuous Manner than heretofore; whereby it is demonstrated, that Smellie uses the Forceps in Cases that don't require it, and thereby increases the Dangers to both Mother and Child. This also naturally led me to set forth the Advantages and Perils that attend the Use of

<sup>(</sup>d) Introd. p. 69. (e) Pref. P. 2. (f) Introd. p. 64, 65. the 003

the Forceps; and indeed of the other Instruments also, with the various Methods of putting them into Practice; which I have done in a clearer and more ample Light than beretofore. Whereby it is evident at one View, that by Smellie's Method the Patients endure not only greater Pain, which is also of longer Duration, but is attended likewise with more Danger than by my Method; as may be seen in the summary Recapitulation of some Cases, from p. 217 to 222.—To conclude, in the Course of these Remarks the Weakness of Smellie's Arguments are shown in various Places; and it is likewife demonstrated, that ' his Instructions are neither fo clear and perspicuous, nor his Remarks so judiciously and happily deduced, nor yet bis Practice so unexceptionable,' as the Review Writer informs us below (g), as will be seen in several Places of the ensuing Letter; particularly in his contradictory Directions what Method is to be taken when the Head of the Child is too large, or the Pelvis of the Mother too narrow (h): For in one Place be directs that the Operator 'Should not attempt to turn the Child, but try the Forceps; and if they do onot succeed, diminish the size of the Head and extract it with the Crochet. In another Part in the like Cafe. he orders ' the Head to be extracted by the Crochet ; but the Forceps, says be, ought first to be tried: Yet but two Pages before be told us in the same Case, 'The Head will in Time slide gradually down into the Pelvis, even when it is too large to be extracted with the Fillet or Forceps.' And in another Place be says, 'The Pofition of the Head should be replaced always, and more especially when the Pelvis is too narrow or the Head ' too large,' Again be tells us, ' If the Head be large f or the Pelvis narrow, the Child is seldom saved either by turning or using the Forceps, untill the Head shall be farther advanced.' In another Part be fays, 'The Child is seldom now destroy'd but when the Pelvis is

<sup>(</sup>g) See p. 4. of the Letter. (b) P. 247, 255, 257, 280, 291, 294, 356, 357.

' too narrow or the Head too large.' And when the Pelvis is very narrow or the Head too large, place

the Head right and let Labour go on.' All these various and contrary Methods are taken notice of in their proper Places.

Affixed to this Letter are a few Remarks upon the 33d Article of the Monthly Review for Sept. 1751, wrote by one Kirkpatric an Irishman; wherein his Partiality and want of Candour are shewn in several Instances; which are indeed so evident to any attentive Reader, that I should not have taken any notice of them in Print, had not this Opportunity offered. The are he here

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# Control of the product of the state of the s

# CONTENTS.

PRoved that Smellie (or the Person he copies fre	
read the Authors quoted, never understood them, or	
represented their Meaning, from	Page 1 to 59
That be has not given a Summary Account of	the Practice of
Midwifery, with the Improvements which have be	
both among the Antients and Moderns, from Hippoch	
the Publication of his Book.	ibid.
That the treatment of Accounts are not taken from	the Onininale
That the pretended Accounts are not taken from	the Originals
but from Spachius, in one Volume, and from Le Clere	c and Friend's
History of Physic,	ibid.
History of Physic.  Smellie's Method of managing new-born weakly Child be awrong.	tren, shervn to
- His Reason for not trying and cutting the N	avel-String of
His Reason for not trying and cutting the N such weakly Children, proved to be insufficient and	bis Practice to
be wrong.	22. 24. 25
- His Arguments to prome the Placenta performs to	he Same Office
be wrong.  His Arguments to prove the Placenta performs to before, as the Lungs do after, the Birth of the Child insufficient and weak.	tropped to he
info frient and anal	, proven to ve
II Wife I Midele in Domenton	44, 25, 20
1143 not recipied terrain inipakes in Deventer,	ous was mij-
took that Author's Meaning.	32, 33
The Obliquity of the Uterus proved by several Aut	bors, against
Smellie's Opinion, whose Reasons are proved to be	s inconclusive,
The Company of the Co	22 00 44
Smellie contradicts himself, and proves Deventer's	Opinion to be
right.	AT to AA
By mistaking Deventer's Meaning recommend	a dangerous
Method of Practice. Meaning, recommends	, 183 to 189
	19 204 20 200
La Motte and other Authors vindicated against the	Aspersions of
Smellie and the Review Writer.	51 to 56
A Catalogue of several Authors omitted by Smellie.	56 to 58
<b>a</b>	Smellie's

Smellie's Affertion, that whoever intends to practife Midwifery, ought first to make themselves Masters of Anatomy, agreed to.
6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Smellie's anatomical Descriptions, not only in many Places desicient,
but in most proved to be falle. 60 to 75
Theory in the Practice of Midwifery explained. 76
Smellie's Inconfiftences shown in regard to Theory, in one Place com-
mending its Use, in another saying it is of no use. 76 to 79
His Account of the Coccyx proved to be wrong 79, 80
An Omission in Smellie's Defeription of the Pelvis shewn. 80, 81
That the Coccyx will not yield one Inch, and Smellie's Hypothesis or
Theory sherun to be vain. 81 to 98
Smellie's Account of the Situation of the Fætus in Utero, and his
Hypothesis of its Manner of turning therein, and his Method of
feeling the Child's Head in some Stages of Pregnancy, while the
Os Uteri is closed, shown to be fallacious.
Method of knowing the Shape of the Bag in which the Fætus
lies, shown to be wrong and fallacious. 98, 99
-Account of the Increase and Decrease of Labour-Pains shewn
to be ableune and in lome Parte contradi form
be wrong; and another Attempt to account for the same in a more mechanical Manner offered.
The Weakness of Smellie's Objection to the Fatus in Utero receiving
ite Namifement by Absoration At South and America to be no American
its Nourishment by Absorption set forth, and proved to be no Argument against it. 103, 104
W. Math. I to be taken suban a Anamont Weman has an Oblan Gion
His Nethods to be taken when a pregnant Woman has an Obstruction
of Urine or a Difficulty in going to Stool, proved not only ineffectual, but often dangerous.
out often dangerous.
In several Complaints during Pregnancy, his Directions, in some Cases
shown to be impracticable, and in others ineffectual or prejudicial.
104 10 10)
The Introduction of the Fingers into the Patient's Reclum, as directed,
proved to be very prejudicial to both Mother and Child, and will not answer the Operator's Intention.
not answer the Operator's Intention.
Bleeding, with Design to quicken Labour Pains, shown to be worong.
Leaving the Placenta in the Uterus after the Birth of the Child, proved
to be bad. 112, 113
Smellie's Method of extracting the Placenta shewn to be always very
painful to the Patient, and sometimes may be attended with bad
Consequences. 113 to 116
Pressure of one or both Hands of an Assistant upon the Patient's Belig
while the Operator is about to extract the Placenta or Head of a
Child, left alone in the Uterus, or when the Child's Head is to be
opened while the Body remains in the Womb, as recommended by
Smellie, shown to be in all Cases painful to the Woman; in some
ineffectual, or very dangerous.
The

The Advantages and Dangers that may accrue, either to Mother or Child, from turning the Child in the Womb and extracting it by the Feet, fully set forth.
The Dangers of compressing the Child's Head too much or too long, be- fore its Birth, proved.  120 to 125 In what Cases the Child ought to be turned.  125 to 129
Smellie's Rules when to turn the Child in the Womb, when the For- ceps are to be used, when the Pelvis is too narrow and the Child's
Head is too large, &c. shewn to be very obscure, in some Cases insufficient, in many Places contradictory, and in others of very bad
Consequence. 129 to 135, 144, 145, 151, 153, 154, 155, 190 Fillet, when and how to be used, with the Advantages and Disadvantages thereof set forth.
wantages thereof set forth.  Forceps. the Advantages and Dangers attending the Use thereof, both to Mother and Child, fully set forth.  135 to 143
That Smellie uses Instruments when Delivery may be safely performed without.  136, 143, 145, 146, 148, 150, 151, 156  Method of using and managing a Patient of a delicate Con-
stitution shewn to be in some Cases wrong, in many dangerous.
moveably fixed in the Pelvis. 149, 150
Ould's Practice in some Cases preferable to Smellie's.  Smellie's Method of opening the Head of a Child, when that Part presented, shown to be a tedious Operation, and dangerous to the
Mother; and a safer, easier, and more expeditious Method shewn. 157, 163 to 168, 212 to 220
Smellie's Delivery with the blunt Hook proved to be an useles and
painful Operation, and a better Method shown. 169 to 171  ——Method of delivering the Body after the Head is extracted  shown to be always a tedious and painful Operation, and frequently
ineffectual; and a better Method shown. 172 to 179, 221,
Method of pulling at the Child's Chin wrong, and another proposed.  180, 181, 182  First Method, turning the Child in the Womb, ineffectual, and
fometimes dangerous; and a better Method offered. 182, 183, 189, 190, 191, 194
Method taken in Floodings during the last four Months of Preg- nancy often pernicious. 183 to 187
Of preventing Faintings after Delivery ineffectual, and often dangerous.  185 to 189  A Case mentioned by Smellie that can never happen.
A Method recommended by Smellie, scarce, if wer, to be executed.
Method of separating the Head from the Neck dangerous, if practicable.

Smellie's Arguments for not multiplying Instruments weak and ridiculous
Smellie's Arguments for not multiplying Instruments weak and ridiculous  200  Method when the Child's Head cannot be extracted the connected to the Body, shown to be dangerous to the Mother. 199 to
Method when the Head is left in the Womb after Separation from the Body in all Cases tedious, in some will not answer the End, and in others dangerous to the Mother; and a better Method shewn.  203 to 211, 223, 224  Practice in Floodings after Delivery, ineffectual or dangerous.
Mistake about some Causes of After-Pains shewn. 215, 216 Smellie's Method of Practice, in five Cases, compared with that of this Author's, which last, at one View, is shewn to be preferable, from
A better Method for the Management of new-born weakly Children, than is generally followed, set forth.  227 to 231.  The Partiality and Want of Candour in the Writer of the thirty-third Article of the Monthly Review for September 1751, fully proved, from  235 to the End.

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PON a cursory Perusal of your Treatise on the Theory and Practice of Midwifery, with the Introduction thereto and comparing them with a few common-place Remarks I had made forme Years ago upon this Subject. I cannot help thinking you are grofly mistaken in various Parts.

To confound all Nature—all Distinction of Sex—

To make Animals Vegetables, and one and the same Author two different Parsons; and neither Character agree with the true one To palm upon us an Author that never existed To pass over in Silence feveral material Things that contradict your own Practice in those Authors that are genuine, and make them say Things they never dreamed of, in order to countenance in, &c. St. is fach a Piece of History as the present Age cannot boast of; yet, strange as this may seem to be, you have done it. I would not forestal my Readers, but my References will sufficiently confirm the Truth of these Observations; and if any Thing can be added to shock human Faith, or prejudice your Character as an Historian or Translator, it is your having converted Lithopædii Senonensis Icon, (which you call Lithopedus Senonenfis) an manimate, petrefied Substance, into an Author, after you had been fix Years cooking up your

Such uncommon Errors, with many more, as I shall shew in the Sequel, berray so great a Negligence in an Author, and Difregard of his Reader's Understanding and Judgment, that I fear the Writers of the Monthly Review will greatly incur the Displeature of the Public, for not only omatting to take notice of them, but on the contrary for applauding such a Performance. Indeed as they are but Men; they must be liable to err,

while human Sense and Reason are in the present imperfect State, in proportion to the Degree of their Learning, and Knowledge of the Subject treated of, and according to the various Passions and Frailties, that are hard to be separated from human Nature. To the Predominence of which of these, the Account in the following Article in the Review is to be imputed, I will leave the Public to determine, after having perused these Remarks.

As I shall have frequent Occasion to refer to some Part or other of the 61st Article in the Monthly Review for December 1751; and as the Reader may not have that Number by him, I shall here prefix a Copy of it, that he may be better able to judge, from the Arguments and Facts I shall produce, how far the Writer has dealt partially or impartially, in regard to your Treatife on Midwifery, supposing him to have understood the Subject, which in Charity I hope he did not.

After giving the Title of your Book, the Writer of the Article proceeds, and divides the Account into four Paragraphs, to each of which I shall prefix a Number, for the eafier finding out the Part I shall re-

fer to in my Remarks.

Sixty-first ARTICLE.

1. " To this Treatile is prefixed a short Preface, apprizing the Reader of the Doctor's Motives, for committing himself to the World, and containing a " fuccinet Account of the Work, which begins with an Introduction, exhibiting a summary Synophis of the Practice of Midwifery, both among the Antients and Moderns, with the Improvements, which " have been made in it, from the Time of Hippocrates to the present Age; then follows a distinct and regular System of the obstetric Art, in all its Branches, comor prebending the Anatomy of the Parts, the Difeales incident to pregnant Women, the various Methods of 66 delivering in natural, preternatural and laborious \* Cases; the Disorders proper to Mother and Child, ming a factor with the factor of the

er either at, or after the Birth, and the Choice and

Management of Nurses, whether wet or dry.

2. "In perufing this Treatife, one may easily perese ceive, that the Author is perfectly Master of his Subinject, and that far from endeavouring to amuse his
Readers with vain Hypotheses, or, as vain Exaggerations of his own Success, he afferts nothing that is not
injustified by his own Experience, and fairly owns the
Circumstances of his own Miscarriage, in those In-

" stances wherein his Attempts have failed.

3. " His Description of the Pelvis is accurate, his Observations on its Structure, and that of the " Child's Head, ufeful and ingenious; and, if we are or not mistaken, he is the first Writer, who upon mechanical Principles hath demonstrated the different Modes of Operation, in all the Emergencies of Practice: he, in a very minute Manner, recomimfelf hath improved that Inftrument, and then proceeds to give a Detail of other Expedients used in the Practice of Midwifery, some of which he hath also rendered more commodious; and tho' be bas laid repeated Injunctions on the young Practitioner. to avoid as much as possible the Use of Instruments. he has likewife proved, beyond all Contradiction. that, in some Cases, they are absolutely necessary for the Prefervation of the Patient's Life; be confutes the erroneous Nations that have been entertained by the se modern Writers on this Subjett, rettifies certain Mistakes of Daventer, touching the different Situations of the Uterus, and justly blames La Motte for having ess essayed to mistead young Men in their Opinions, by concealing the unsuccessful Part of his Practice. which mult have been confiderable, if he, on all " accounts, neglected the Use of Instruments, against which he indifcriminately exclaims.—In a Word, Dr. Smellie's Improvements are, in our Opinion, " folid and effectual, bis Instructions clear and perspicuons, bis Remarks judicious, and happily deduced, bis general Method of Practice unexceptionable; and there is an Air of Candour, Humanity, and Moderation, through the whole Book, which cannot fail to

engage the Reader's Favour and Efteem.

4. "Affixed to this Treatife are the Author's Proposals for publishing a Set of anatomical Figures, engraved after the Drawings of a very able Artist, who drew them from the human Subject, under the Doctor's own Eye and Direction; and if the whole are as well executed as those Specimens left with the Publisher, it is not to be doubted but the Subscription will soon be filled; for, in point of Design and anatomical Exastness, we may venture to pronounce them to be superior to any Figures of the kind bi-

therto made public."

Now I must own, Sir, from this Writer's Style and Manner, one would think him your Eccho; for in your Preface, Page 2, you tell us, " That the Introduction contains a summary Account of the Practice of " Midwifery, both among the Antients and Moderns, with the Improvements which have been bitherto made in it; and this I have exhibited for the Information of those who have not Time or Opportunity to peruse the Books from which it is collected; that by feeing at once the whole Extent of the Art, they may be " more able to judge for themselves, and regulate their Practice by those Authors who have wrote most judiadd, " nor will the Reader, I hope, imagine, that this Treatife is cooked up in a Hurry, when I inform him; that above fix Years ago I begun to commit my Lee-" tures to Paper, for Publication; and from that Time altered, amended, and digested what I had written, " according to the new Lights I received from Study " and Experience." And " after your long Practice in the Country, and ten whole Years in London— " after reading 280 Courfes of Midwifery, to perhaps " 1000 People male and female-after thousands of " various Deliveries; who can doubt, I say, after those Considerations, that this Treatise on the Theory and Practice of Midwifery, together with the Prints cc menmentioned in your Advertisement, and the Volume of a Cases hereafter to be published, will not compose one of the most complete Systems in the World?" After reading this pompous Paragraph, an indifferent Person will be apt to cry out with Horace,

Quid dignum tanto feret hic promissor hiatu?"

in of son morning A Art. Poet W. 138.

And then having seriously perused your Book, and these Remarks, if he is the least acquainted with the Subject, will he not be apt to add? " Paturium montes, &c. &c."

In Page 3 of the Preface, you fay, "This Work "was principally undertaken with a View to refresh the Memory of those who have attended you, and "for the Instruction of young Practitioners in general."

This being your Delign, I shall principally regard

First, The Subject Matter of your Treatise, and, Secondly, The Persons for whose Use it is chiefly designed.

The Subject Matter of it, when faithfully and methodically delivered, makes a confiderable and useful Part in the Province of Physic; but whenever erroneously set forth, and blindly pursued, must unavoidably be the Source of irreparable Injuries.

And, as to your Pupils, for whose Use this Treatise of yours is chiefly designed, they are, generally speaking, at that Age incapable of forming any Judgment of the Truth or Falshood of your Destrine laid down, or the Practice recommended to them in such a pompous Manner, and therefore may be too liable to follow both.

To obviate so great an Evil, was the chief Motive that induced me to animadvert on your Performance, which I shall do in as sull and clear a Manner as I am able; and that your Reasonings may not lose any of their Force, by my Misapprehension or Misrepresentation of them, I shall every where give your own Arguments in your own Words, that the Reader may have

B 3

the Advantage of feeing the Strength and Weakness of them, and the Justness or Deficiency of my Objections.

This I do for the take, if possible, of coming at the Truth, without the least Anxiety on my Part, to bring People, at any rate, into my Way of thinking; I hope you (as an honest Man) on your Part, will not value a Victory in Point of Argument near so much, as you would be satisfied to see the Truth ascertained by our Labours, the Judgment should be given against you. The Case therefore betwint us is, That we only differ in Opinion in an Enquiry after Truth; and not being able to convince each other, are willing to appeal to better Judges, that they may determine who has the greatest Probability on his Side, without believing our Honours at Stake, which ever Way the Sentence is given.

I shall not take upon me to point out all the Errors you have fallen into; that would carry me farther than my Plan allows; it is sufficient for my Purpose to give some of the most material Instances; that from these your Readers may be cautious how they depend on your other Directions, notwithstanding your dictating to them with such an Air of Considence.

Profice of Midwifery, by which I apprehend you mean not only the Art of delivering Women; but also the Science or Knowledge how to treat them during and after the Time of Labour, and in the pregnant State, in all the Diforders they are therein subject to. This must be your Intention, or elfethe greatest Part of your Introduction, and also a considerable Part of your Treatise, must be superfluous.

of the thirty-three Authors (as you call them) from whom you say (a) you give us the Practice of Midwifery among the Antients, there are fourteen of them whose
Names are only inferred, together with their Place of
Abode, or the Time some of them lived in a and this

more ala) Preface, p. 2. with a most fact to most in consist

you tell us, " you have exhibited for the Information of those who have not had Time or Opportunity to perufe the Books from which it is collected, that by se feeing at once the whole Extent of the Art, they may " be more able to judge for themselves, and regulate their " Practice by those Authors, who have written most judici-" oufly upon the Subject." To what Ufe or Purpole have you only given us these Authors Names! What Information have we from them in regard to the Practice of Midwifery? Or bow can we regulate that Practice from the Hiftory you have given us of them? And as to the rest, I shall shew, that the whole Substance of your Extracts, which you affirm to be taken from the Originals, may be found in one fingle Volume in Folio, collected by Spachius, except a few Pages from Le Clerc's and Friend's Hiftory of Phylic, in which your Readers may find a much better and fuller Account than you have given us. And left the Reader or you should imagine I boaft of more than I can perform, I shall point out where, in general, each Part of your Account may be found.

Part of the second and third Page of your Introduction is taken from Le Clerc (b), but with what Propriety you (or the Person you take it from) can translate, divers Fragmens des Livres, into some Chapters, I am at a Loss to know.

Altho your great Modesty would not let you give us your Authority, yet I suppose Part of the 4th, 5th, and 6th Pages, were first borrowed from the same Author, because they happen to be an exact Translation of his very Words (c), with this Difference only, that you have omitted a very prudent Caution mentioned by Le Clerc, as taken from Hippocrates (d).

In Page 6 you tell us, that Hippocrates, amongst other Diagnostics of the Fluor Albus, says, "The Urine is like that of an Ass." but he says (e), Pode herode fies herode, de sous of the fluore albo effluit quid album, yelut

<sup>(</sup>b) Histoire de la Medecine, part. 2, livre iii. chap. 13, p. 136. (c) Part 1, p. 216, 217. (d) Spachii Gynacior, p. 609, 610, 611, Ge. and 755. (e) De Morb. mulier, lib. ii. p. 641, line 8.

" afini usina." I fancy the following Paffage, in another Place of the same Author (f), with the Translation, as there given, may have caused this Error by the Copier's not understanding the Original; oxó-av & sounds à gois exferntas ofor over paireras; thus translated, cum fluor albus subortus fuerit, urina qualis asini ap-"paret"; but in Spachius (g) it is rendered thus, cum fluxus albus obortus fuerit, velut urina afinina apparet;" and in the very next Page he fays, " Fluxus " albus fluit veluti alba afini urina." In the Oeconomia Hippocrat. (b), it is faid, ofor they, may be read bear son. This, I think, a strong Proof, that you either have not read, or not understood either of these Authors, Moreover, Hippocrates has given the Diagnoffics of this Diforder, much fuller and better expreffed (i), which, in Justice to the Author, as well as to your Pupils, you ought to have mentioned.

The latter Part of your 7th, 8th, 9th, 10th, and Part of the 11th Pages of your Introduction are almost a verbal Translation of different Parts in Spachius (k), as taken from Hippocrates (l), excepting the following Passage in your oth Page, where you make the Author fay, " The Parts (the Os uteri) are to be anointed with some unctuous Medicine, and cau-" tiously separated," whereas in Spachius (m), it is franslated, " oscula dilatare, and Hippocrates says (n), 72 rouara madaxoñou iganolysus, " oscula emollientibus ape-"s rire;" fo that you do not find in either of these Au. thors any Directions cautiously to separate the Parts, altho' you have ordered it, instead of dilating an elastic Orifice was alove and the Change

In the same Page you make Hippocrates say, " The Woman may be refreshed by fitting over the Steams of hot Water;" but the Original is; (0) axers as iaiman, "donec perfundatur," which is thus explained in the Commentaries in Spachius (p), "dum muliebria

<sup>(</sup>f) De natur. muliebr. p. 567, l. 51. (g) P. 856. (b) P. 706, not. 52. (i) De morb mulier. lib. ii. p. 641. (k) P. 602, 603, 677, 678, 679, 683, 684, 685, 696, 1053, 1061. (l) P. 602, 603, 617, 618. (m) P. 680. (n) P. 617, l. 43. (o) De morb. mulier. lib. i. p. 618. l. 9. p. 719. (p) 682. ee pu-

Cordaus says, saino 924, "hoc loco, idem significat quod" Text 2021 & darie of a : and Heysichius explains

iaiveo Sas, diaxing Jas, in the same manner.

The remaining Part of your 11th and 12th Pages are likewise in Spachius (q) and may be found in Hippocrates (r); but I dare fay you cannot have taken them from either of their Works, because you have totally inverted the Order in which Hippocrates has delivered them, when there can be no Manner of Reason assigned for fo doing : For he fays (i), io in malifa madaiperas to λοχεία, σκόροδα iosa, η όπτα is αιω και ελαίω μετά πυλυποδίως, mum expurgantur, allia cocta aut affa, ex vino & oleo, cum parvis polypis & sepiolis;" and in Line 32, he fays, ná vea de à vácdor muéro, níver de nai myaror in olive μελάνι γλυκεί, νής ες, η άνευ δίνε, " castoreum autem aut nar-" dum bibat. Ruta etiam jejunæ ex vino nigro dulci bibenda, aut fine vino." This Part you have translated into Garlick, boiled or roufted, Small Onions, Castor, Spikenard, Rue, and Black Wine. In Line 46 Hippocrates goes ΟΠ άριτον δε πάντον οίδα, άρτεμισίην ζοτάγην, και δικτάμινον, λευμείου άνθος και όποι σιλφίε, " omnibus autem præstare novimus artemisiam " herbum, & dictamnum, ac albæ violæ Flores, & " Laseris succus:" And in Line 50, Hippocrates proceeds: κάπειτα πέταλα της άγιου τρίθας is δίνω, και μελίτι, " deinde aghi casti Folia ex vino & melle trita." Whence you see Hippocrates began with those Things, which he thought the mildest, and proceeded to those which he says are aprov de warren olda, &c. " omnibus autem prastare novimus, &c." but you have perverted his Method; and have directed to begin with the laft.

The first Paragraph of your 13th Page may be found in Spachius; (1) and in your next Paragraph the . Original is musconstrued. For you have made Hippocrates say, "If the Woman could not be delivered with"out the Help of Machines the Child is generally "weak;" but that Author says, (u) — + Kas µnxamor interest et sine ope medici. How you could commit such

Line the lait.

<sup>(</sup>g) P. 631, 632, 633, 68, 712, 713, 715, 716: (r) P. 608. (s) P. 608, 1. 29. (t) P. 789, 1057, 1058, (u) P. 261, 1. the laft.

Miltake I cannot conceive: For first, had you only attended to the Sense as translated by Fasius, you could not have understood him in that Light ! for he fays. " muliere ægrè pariente, fi Fœtus in naturalibus locis hæreat, neque facile exeat, fed cum labore, neque fine medici ope." And fecondly, a Person fo well verfed in the Methods used among the Antients, as you inform us you are, cannot forget, that we read of no Machines wherewith to deliver a Woman, but what killed the Child, (except the Fillet) till Avicenna's. Time, who was born according to Friend (w) in A. C. 980, and dyed 1036, about 1400 Years after Hippocrates's Death, which happened above 360 Years before the Nativity of Christ (x). Thirdly, a Man of your Practice cannot be ignorant that when ever the Woman has a difficult Labour, and the Child flicks in the Paffage for any Time, it generally is weak, efpecially if the Woman has been to enfeebled as to have Occasion for Medical Affistance to increase her Pains. Fourthly, Hippocrates does not tell us that the Child is generally weak; for he fays (y) ταυτα τα παιδία αρτίζως pauci funt Temporis; they generally don't live long; Sense also, Heysichius takes it. Lastly, you seem not to make the proper Distinctions between a Child's being generally weak, and being generally short lived; in the first Case, tho' weak, it may recover and live many Years; but in the last it is commonly weak while the anche more wishes

Your translating page, now into Machines, puts me in mind of the Story of Pallet the Painter in Peregrine Pickle, (2) who hearing the Swifs pronounce the Word Magnifique, mistook it for Manufac, as he did Un Base morçum, for a Painter. Had I the Talents of the ingenious Writer of that Book, what a pathetic Harangue might I here make on the Usefulness of critical Skill in

gor, Howell

<sup>(</sup>su) Hist. Phys. past 2. p. 39; Part 2. (x) Wolfgang. Justus in Chronolog. medic. Justa Renat. Moreau, Nat. ante Cheist. 453. (y) De superfect. p. 261. Line the last. (z) Vol. 2. Chap. 46.

Language in these Cases? Some Latitude may be indeed allowed for peculiar Graces and different Idioms, in different Languages, especially in Poetry; but in Matters of Faith, and Matters of Fait and Experience; a Translator's first Aim is to be, "Fidus Interpres." With such an Aid de camp I might hope to make even these Remarks very agreeable. But plain Sense and Usefulness is all I ever defined; and I must own, I had rather find out one good Rule or Method of Practice, than be the finest Writer in the World in point of Style.

Non nobis licet effe tam difertis, 310 19 2011

" Qui mulas colimus severiores."

MARTIAL. Lib. ix. Ep. 12. V. 17.

But to return—your 14th Page was originally extracted from Spachius (a) with this Difference, that you have omitted to give a material Symptom or Diagnostic; for Hippocrates lays (b) Kalin yarm trappera

venter attollisur," and the Belly is swelled.

A few Lines below, you fay, Hippocrates preferibes
Garlic, Cafter, or Rue boiled with Garnied, "but
the Original runs thus, (e) napapioyora for ordination of the
the Original runs thus, (e) napapioyora for ordination of the
Riace he fays (d) ordination of Sepise Testam; both
which he repeats in leveral other Parts of his Works.
(e) What should induce you to translate, Sepise Ova
into Garlic or ordination. Sepiolis (f) into small Origins, as
you call them in your rath Page, is to me no small
Surprise; because, when a School Boy, you might
have read in Persus, that Sepia is not a Vegetable, but
an Assimal;

Nigra quod in ula vanescat sepia Lympha.

Sarra ili. v. 12.

Johnston (g) also would have convinced you, that Sepia and Sepiola were not Vegetables, and were often prescribed both in Diet and Medicines; nay, had you

<sup>(</sup>a) P. 609, 610, 611. (b) P. 603, lin. 49. (c) P. 604. lin. 3. (d) De Superfect. p. 266, lin. 49, 267. lin. 9. (e) P. 576, 624, 625, 632, 651, 653. (f) Hipp. p. 668. lin. 36. (g) Nat. Hift. de Exanquib. a quat. lib. i. Tit. ii. cap. 2.p. 8. peruled

perufed Celfus (whom, on other Occasions you quote) Galen, Diofeonides, Pliny, and almost any other antient Writers, you could not have committed fuch a gross Miltake and I must add, that in this Part of Hippocrates, whence your Extract was originally taken,

there is no mention of Onions at all.

In the next Place, the following Words of Hippocrates are again misconstrued for he says (b) and the have called Farina Outment, whereas above made for often Use of by Hippocrates, ansupor " dici scribit Heysi-" chius et præcipue Truiei Farinam fignificat," (i) and whenever that Author orders the Use of Farina, without specifying what Sore, Heysichius fays, it always fignifies Wheat-meal, for, where Hippocrates intends any other Sort of Faring, he names it, as for Inftance, (k) appr vai panor aroyer, "Lolli et Lentium farinam, and (1) with any farinam hordeaceam," and fo of the other Sorts. Moreover, in all that Part of Hippocrates, whence your Extracts were first taken, there is not the Anno Gous. "Faring Avenæ." True indeed, their Triticum and our Lammas Wheat are different; the first being bearded, and therefore called Arifta, which is often used by the Poets to express Wheat; and all the Statues and Medals of Ceres, that I ever faw, have no other Corn represented on them, than that which is bearded (m)?

As you have mentioned (n) several Medicines prescribed by Hippocrates to bring away the Secundines, I am furprised you should omit the saw on ones. " Succus "Laserpitii vel Cyrenaicus," so often ordered by him upon those Occasions. And likewise as you have been at so much Trouble to draw a summary Account of these Things from the Antients, it is a Wonder you should have omitted to give your Readers that minute Description of the Diagnostics, &c. of an Inflammation

<sup>(</sup>b) P. 604. lin. 5. (i) Con. Hipp. p. 19. (l) Loc. citat. et pa. 668. lin. 3. (l) P. 570. lin. 4. (m) Virgil Georg. by Martin, lib.i.v. 219. (a) P. 12. 10 Nat. Hill. de Languil. a past he is a n il cap. z.

of the Uterus, after Delivery, with the Method of Cure, as told us by Hippurates, (o) fince you have taken Notice of so many less useful Thingsup In short; whatever you have mentioned, as from Hippurates, may be found in Le Clerc's History of Physic, and in Spachius (p) (except the Emors above mentioned) and I must add, that you have not given us the least Hint of Hippocrates's "Liber de Foetus in utero mortui exectione (q), aguardas has another According to the contraction of the co

After Hippocrates, the next Author you mention is Aristotle. (r) But as little as you have said of him, it may be found in Spachius (1). Where may be seen several Observations of his worthy of Notice valthough omitted by you; one of which is, "(1) Post partum et post Lotia lactescere mammas, et quamdiu Lotia et "Menses feruntur Lac non effundendum, neque enim

" natura inquit tam large profundere potest per utram" que partem; sed si in alterutram partem secernit, in
" altera deest, nisi quid accideret violentum, et præ-

ten id quod magna ex parte confuetum eft."

Celsus comes next; and although the whole Chapter does not exceed four small Octavo Pages, they contain all he says upon our Subject; (which may be found also in Spachius) (u) and yet the most material Part you have omitted; for speaking of the Manner of using the Crocher, you tell us, it is to be fixed upon the Head; but Gelsus says (w) "Turn demitti debet uncus, undique lævis, acuminis brevis, qui, vel oculo, vel auri, vel ori, interdum etiam Fronti rectè injicitur." You have likewise omitted a prudent Caution, for he directs "trahere autem dextra manus uncum; sinistra, intus posita, infantem Ipsum simulque dirigere eum debet," from whence it is evident that Celsus was no Stranger to the Necessity of keeping the Apex of the Child's Head in the Center of the Passage. He likewise gives Direction how to extract the Placenta, for he says, "Quoties

<sup>(</sup>a) P. 609. (p) P. 600. et sequent. (q) P. 914. (r) P. 15. (s) P. 757, 773, 782, 787, &c. (t) Hist Anim. libriu cap. 10. lib. x. cap. 11. Spach. p. 792. (u) P. 796. (w) Lib. vii cap. 29. P. 491.

Infans prottachus eft. Medicus deinde finistra mano Meniter trahere Umbilieum debet ita, ne abrumpat. demaque cum fequi ufque ad eas quasfecundas vocant auod Velamentum infantis intus fuir: hifque

si ulcimis apprehensis, ventilas membranasque omnes \* eadem Ratione Manu diducere à Vulva, totumque

silled databere, et fi quid intus præteren concreti

" fanguinis romaneat. Esc.

Moschion is the next Author, and although his Work is in the Volume of Old Mederus as you call them. (x) collected by Spachius; yet you exhibit him here as an Antient. As the learned Haller () fays, it was wrote originally in Latin and translated into Greek I shall follow the former; but the chief Part of both is in Spachius, and the Estracts, you fay, you give us from Mafebion are in his Collection (z). However you have omitted some of his good Rules and Methods of Pracsice, and make him speak Impassibilities, or what can never happen in a regular made Child. For you fay (a) he tells us that " the best Position is that of the Head presenting, the Hands and Feet being mingled and difpefed along the Sides." But the Original runs thus, (b) " quoties in caput feruntur, its ut in orificium matricis directum caput ejus inveniatur, manibus " feilicet lateribus et femoribus junctis." But lest you should charge me with not giving a fair Account, I will here present you with the Greek Translation also.
(a) οσάνες ματά Καθάλαν φέρνται ότως ώς ώς το τόμα της μάτρας πόθως το περαλά άντο περέθησηται, τὰς χύρας δηλοιότη τως πλουρώς έξευγμώνας. So that take which you please, Moschion does not say any thing of the Hands and Feet being mingled and difpojed along the Sides. Moreover you must know, that when a Child prefented in the best Position, it was imposlible that the Hands and Feet could be mingled and difposed in the Manner mention'd. Whence it is evident that your Extracts are not taken from the Originals.

Your next Author is Rufus Ephefius, but all you fay

<sup>(</sup>a) Introduct. p. 46. (y) Meth. flud. med. p. 581. (c) P. 11. and 12. (a) P. 19. (b) P. 10. in Spachius. (c) Cap. 147, 148, p. 19.

of him is taken "verbatim" from Le Glere (d) is to there is no Occasion to consult the Original for your. Extracts.

You tell us nothing of Galen worthy of Notice; and what you fay of Oribahus, may also be found in Le Clerc (e). The two last Books of his (Oribahus) Works are so nearly copied from Galen, that he was called Simia Galeni, Galen's Ape, as Friend tells us (f), but you have so far mistook, as to make an Ape of Aëtius (g) who is the next original Author you say (b) you have taken Extracts from, which sill up 18 Pages of your Book; but every Thing material that you have copied, may be seen in Spachius, chiefly from Page 1053, to 1063 inclusive; where your Reader may find whole Pages translated verbatim from him,

In your 30th Page you fay, "That Action's 29d Ch. " contains the Method of Extraction and Exfection of " the Foetus, from Philumenus." In your goth Page you cell us, " The Substance of his 24th Chapter is also "taken from Philumenus;" and in the 38th Page you fay, "Paulus Ægineta's Practice is much the same as " that of of Actius and Philumenus" And in the next Page you say, " His Method of extracting a dead "Child and the Placenta is much the fame as that already described by Philumenus." And in your 41st Page you fay, " Avicenna took the Extraction of the Secundines from Philumenus"; and "the Operation for the dead Child from Paulus" (Agineta,) who you told us just above (i) "took it from Philumenus": And laftly, in Page 70th, you tell us, " Philumenas goes fill farther, &c." From all which Extracts your Reader, I dare fay, will imagine, that there had been some Book published of Philumenus's, and that you had read it, and compared his Works with the Bath Chapter of Actius; or elfe, how could you have

<sup>(</sup>e) Hist. de la Medic. Part 3, Lib. ii. Chap. 3, p. 105.
(e) Ibid. part. 3, Ib. iii. chap. 1. p. 108, 109, (f) Hist. Phys. part 1, p. 6. (g) P. 22. This Mistake the Author has corrected in the 2d Edition. (b) P. 21. (i) P. 39.

discovered, that the Substance of that, as well as. of his 23d Chapter " contains the Method of Extrac-" tion and Exfection of the Fætus from Philume-" nus?" whereas Philumenus, who died A. C. 350 (k), never wrote any Thing that was published, except Fragmenta Varia, which were printed amongst the other Collections made by Aetius Amadeus; and those upon our Subject, viz. De Fatus extractione, &c. are to be feen at large in the 23d, 24th, 27th, 28th, 83d, and rosth Chap. Tetrab. 4, Sermon 4th, and composed that Part of Actius's Works; But you have mentioned them as the Performance of different Persons; or else Agineta's Practice would scarce be the same as that of Actius and Philumenus; whereas Philumenus wrote these which were only collected and published by Aëtius, and composed the Books as above.

Paulus Ægineta is the next Author after Actius, and the Extracts from him also may be seen in Spachius, in which your Readers may find, that Rochaus (1), as taken from Ægineta (m), tells us, "Si os cervicis uteri obliquum suerit, &c. difficillime pariunt?" And in the next Page he says, "Humore siquidem, qui in utero collectus suit, vacuato, ægerrime delabetur Embry-

on propter Aridicatem."

Your Account of Paulus Egineta may be seen in Friend's History (n) of Physic, where you may find this Author copied many entire Passages from Alexander de Tralles, in his very Words, as did Serapion, your next Author (v), after whom follows Rhazes, who was the first Person that wrote a Book on the Diseases of Children (p); and, according to your Introduction, (q), is the first Person that used the Fillet. The next to him you have placed Avicenna, who is the first that has mentioned any Instrument to extract and preserve the Child, except the Fillet; for, says Mercurialis (one of the Authors in Spachius) (r), as taken from Avicenna, Prima (regula) est, ut obstetrix tentet manibus edu-

<sup>(1)</sup> Vander Linden de Script. Med. p. 923. (1) Spach. p. 103. (m) Lib. iii. cap. 76. (n) Part 1. p. 85. (o) Ibid. part 2, p. 23. (p) Ib. part 2, p. 30. (q) P. 41. (r) Lib. ii. cap. 3, p. 236.

cere; si verò manibus non potest, fascia circumligetur fætus corpus, atque ita paulatim educatur. Si verò hoc non succedat, habent obstestrices quædam tenacula quibus circumligant pannos ne lædant vel of-

"fendant fætum iisque educant." This Instrument we suppose to be the Forceps, altho' he does not de-

scribe its Shape or Form. Vide Chap. 8.

Your next Writer is Albucasis, whose Works are in that Volume of Old Moderns, as you call them (s), collected by Spachius; and even that Account is also taken from Friend (i), where your Reader may find what is mentioned in the Arabian Manuscripts, that is lodged in the Bodleian Library, without going to Oxford to

confult the Original.

After Albucasis you place Raynald, who published in 1565; but as he translated Eucharius Rhodion de Partu Hominis, whose Works I have never seen, I can say nothing about him. I come now to that great Fund whence your preceding Accounts have been chiefly extracted, contained in one Volume in Folio, under the sollowing Title, viz. "Gynæciorum sive de Mulie-" rum tum communibus, tum Gravidarum, Parien-" tium, & Puerperarum affectibus & morbis, Libri "Græcorum, Arabum, Latinorum veterum & Recentium editi, opera & studio Israelis Spachii, Argentinæ, 1597."

In this single Volume are contained the Works of twenty-one Authors, as you call them; fourteen of which you only just name; wherefore I shall once for all acquaint the Reader, that I shall pass them by in the same Manner, except in such Things as are worthy

of Notice.

Platerus leads the Van, and immediately precedes Moschion, whom you have already mentioned amongst the antient Writers. Next to him succeeds the Harmonia Gynaciorum, &c. and then follows Eros.

You say Eros or Trotula, as if there was a Dispute which of the two was the Author of this Treatise, " De

<sup>(</sup>s) P. 46. (1) Part 2, p. 66.

Passionibus Mulierum; but had you read the Book, you might have found that Eros mentions Trotula as a different Person, and not as the Author; for he says (u), "Undè communiter Trotula vocata suit, quasi magistra Operis: Cum enim quædam puella debens incidi propter hujusmodi ventositatem, quasi ex ruptura laborasset: cum eam vidisset Trotula, admirata suit quam plurimum." Had you even read the Title-Page of this small Treatise, you certainly would not have named Trotula at all; for it runs thus, "Erotis Medici Liberti Juliæ, quem aliqui Trotulam ineptè nominant Liber, &c." Whence I think it is pretty evident that you have never read this Part of Spachius.

You then proceed, Page 47, to Nicholaus Rochaus, whose Works, you say, are taken from the Greeks and Arabians: But had you ever read him, you might have found, that he copied also from the Latins, and others; particularly from Celsus (w), Pliny (x), and from

Eucharius Rhodion, a German (y).

You say, "His 30th Chapter contains Directions for extracting the Placenta, when it adheres; in which case the Os uteri must be dilated, and the Acconcheur taking bold of the Funis, must pull gently from Side to Side, lest the Uterus should be brought down." But Rochaus (2) says, "Si itaque Os Uteri diductum fuerit, & secunda, quæ inibi relicta est, alicui parti uteri orbiculatim, ac pilæ modo convoluta inhæserit, facile educitur, manu siquidem sinistra calida pinguique illita in Fundum demissa, secundum subal-uteri extrahere oportet. Si autem Fundo uteri sit connexa, demissa simili modo manu calida, & pingui inuncta apprehensam Secundam trahemus, non tamen in rectum, ne uterus procidat, neque violenter admodum, sed leniter ac placide primum in obliquum diducemus, huc atque illuc circumagentes; deinde paulò validius

<sup>(</sup>u) Cap. 20, vide Spach. p. 50. (w) See Spachius, p. 62. (x) Lib. x. cap. 64. Spachius, p. 79, 105. (y) De Partu Hominis Spach. p. 107. (z) Spachius, p. 107. from Fuchsius, lib. iii. De Morb. mulier. cap. 64.

"attrahemus, hoc enim pacto obsequentur, & a con"nexu solventur." Whence you find he does not direct
the Operator to pull the Funis at all, because he does not
so much as name the Word Funis or Umbilical Chord.
Whether you have wilfully misrepresented the Author's
Meaning, in order to justify a Method of Practice recommended by you, must be left to the Reader's Judgment.

Ludovicus Bonaciolus is the fixth Author; but althory you pass on without taking any further Notice of him, I shall shew a very beneficial Method of Practice related by him, which you have omitted; for his Method will preserve many Lives, which by yours must generally be soft. In giving an Account of the Duty of a Midwife, he says (a), Peritiores nonnullæ obstetrices cruentum succum intro de umbilico reprimunt, quo diligentissime per acto, infans, qui modo exanguis exanimatusque è vita excidebat, mox redivivatur, recreatur, vitæque restituitur.

The next is Jacobus Sylvius, who is followed by Jacobus Ruffus, as you called him in the first Edition; but his real Name is Rueff, if we are to trust the Title-Page of his Treatise; as in Spachius (b), De conceptus & generatione hominis, & iis quæ circa hæc potisfimum considerantur, Libri sex, congesti opera Ja-

cobi Rueff, Chirurgi Tigurini.

2

You have omitted to tell us, that he directs (c) to fetch the 'Secundines, matrice adhuc diducts & aperta, antequam refericts denuò conniveat." In Pages
48, 49, you tell us, that 'Ruffus is the first that gives
a Draught of the Speculum Matricis, for dilating the
'Os Internum, which he directs to be stretched in
'Width; but by no means Lengthways, lest the Ligaments breaking, the Womb should fall down; but
in the Original you will find it thus (d): 'Hanc autem
'viam (os Uteri) quando infans per se (uti aliàs natura solet) neque invenire, neque aperire propter restrictionem interioris Portæ, & propter Claustra ejus

<sup>(</sup>d) Spachius, p. 142. (b) P. 166. (c) P. 175, Spachius. (d) Lib. iii. cap. 6. Spach. p. 177.

impedita valuerit, tunc obstetrix, perunctis manibus, digitos inserat, eamque angustiam quam commodissime poterit in Latitudinem tantum diducat, in Longitudinem verò nequaquam, ne Ligamenta Matricis rumpantur, & incurabilis morbus Præcipitatio matricis sequatur, ejus inquam Inversio, cum Exitu & eminentia colli matricis. Itaque obstetrix in dilatando interiorem partem antrorsum moveat, ut caput Infantis quod proximum est inde se exerat, & in exteriorem partem, collum inquam matricis, prodeat. Nam modo dicta dilatatio interioris partis, neque matri neque proli quicquam incommodare poterit, utpote quam & natura ipsa in facili partu sponte diducit, & post partum restrin-

git iterum.'

I must here observe, first, That in this Paragraph
Rueff does not so much as mention any Instrument at
all; neither does he take any Notice of the Speculum,

till the third and fourth Paragraph after this.

Secondly, That in no other of these following Paragraphs does he direct how the Womb is to be dilated.

Thirdly, That Rueff directs us in dilating the Os Uteri antrorfum movere, because, 'Natura ipsa in facili partu, sponte diducit;' the very reverse of which you seem to want to prove, or otherways how could you take a small Part of the fifth Paragraph, wherein the Speculum Matricis for dilating the Os Internum, is mentioned, and place it before a Part of the first Paragraph, where the Method of dilating the Os Uteri with the Hand only, is directed, whence you have evidently misrepresented the Author's Meaning?

You take no other Notice than of the Names of the four next Authors, Mercurialis, Montanus, Trincavellius, and Albertus Battonus; but you have mistook the last mentioned for Albertinus Bottonus, as you might have seen in Spachius (e), had you read more of him

(e) P. 338. In the fecond Edition the Author pretends to correct this Error; but by following the 'Catalogus Authorum' above mentioned, he is yet milled, which is a further Confirmation that he has never feen the Works of Albertinus Bottonus, there being no Author of the Name of Albertus Battonus, who wrote upon this Subject.

-1111

than the 'Catalogus Autorum qui in hoc volumine constinentur' which follows after the Preface: There indeed you may find Alberti Bottoni, &c. by the same Means, I suppose, you have been led into the Error about

Trotula and Lithopedus Senonensis.

The next Author, Johannes Le Bon, you only name, who is succeeded by Ambrosius Paraus; but you post-pone your Account of him, and then proceed to Albucasis, the Old Modern, already taken notice of amongst the antient Writers. Then follows Franciscus Rousettus, who wrote on the Casarean Operation; but you have not mentioned that he (f) gives us several Histories of the Uterus being taken off, and yet the Patients recovered; and in his sixth Section he tells us of several Women becoming pregnant while they wore Pessaries.

The seventeenth Author, collected, as you tell us, by Spachius, is Lithopedus Senonensis, (g), which instead of being an Author, is only the Drawing of a petresied Child, when taken from its Mother, after she was opened; and this is evident from the Title, Lithopadii Senonensis Icon, which, with the Explanation, is contained in one single Page only. The Account of it, as published by Albosius, in 1582, in Octavo, may be seen at the End of Cordæus's Works in Spachius (b), whence again, I think, it is evident you must have taken your Extracts from some bad Copier.

Your next Author that follows Lithopedus Senonensis, as you call him, is Caspar Baubinus; and after him is Mauricins Cordeus, who wrote Commentaries upon the

first Book of Hippocrates de Muliebribus.

Altho' you thought proper to tell us no more of him than his Name and Place of Abode, yet the chief of what you give us, as taken from Hippocrates,

Error is corrected in the second Edition; but how the Author, as he tells us, he was fix Years in cooking up this Performance, could at first mistake the Title, and represent the petressed Child as an Author that he had perused, and taken Extracts from, for the Information of those who have not Time or, Opportunity to peruse the Books from which they are collected, is what surprises me very much.

is to be found in him, except the very first Part, which is taken from Le Clerc, before mentioned. As a Specimen, let any Person compare what you say in Part of the 8th, 9th, 10th, and Part of the 11th Pages of your Introduction, with the 677th, 685th, and 796th Pages of Spachius, and there he will find not only the Substance, but a verbal Translation of them. Likewise let him compare your 7th and 8th Pages with the 602, 603, and 1053 of Spachius; and your 12th with Pages 631, 632, and 633; as also your 12th with the 1052d Page of the same Author, and he will find there is no Difficulty to extract all you have said, as taken from Hippocrates, out of that single Volume of Spachius, where the Reader may find many other Things of Moment.

The next Author you name is Martinus Akakia, of Paris, without taking any other Notice of him; and yet he confirms the Method of recovering a new born Child, as I have already mentioned in my Remarks upon Bonaciolus (i) For Akakia fays (k), 'Sæpè vifus est puer semi-mortuus nasci, cum ei infirmo prinsquam deligaretur umbilicus, fanguis à puero ad umbilicum & circa efflueret, unde obstetrices peritiores reprimunt inf tro de umbilico fanguinem, quo facto statim Infans; gui modo exanguis deficlebat, recreatur, vitæquè restituitur." If you knew any thing of thefe Passages in either of these Authors; I think you would not have put your Pupils upon fuch a dangerous, nay, I may fay, faral Method of treating new-born, weakly Children, as is mentioned in your Midwifery, from Page 225 to 231, of which I shall take notice in its proper Place. And Mercatus tells you (1), delaying to tie and cut the String is dangerous. 'Nam fi diutius differa-"mus, puer periclitabitur aut morbofus evadet." And in the next Page he fays, . Si tamen umbilicum resecare ob ingentem necessitatem, & ne fœtus pereat cogaris, &c. From which it is plain, That by Observation the

<sup>(</sup>i) Spach. p. 142. p. 19. of this. (k) Spach. p. 787, 788, Lib. ii. cap. 7. (1) P. 1058.

Antients had found the Child's Life in Danger, while the Passage through the Umbilical Chord was open, and permitted the Blood to pass to the Placenta.

But you fay (m), 'If the Air does not immediately rush into the Lungs, and the Circulation continues between it (the Child) and the Placenta, the Operation of tying and cutting must be delayed; and every Thing tried to stimulate, and sometimes to give Pain. If the Circulation is languid, Respiration begins with Difficulty, and proceeds with long Intervals; and if it be intirely stopped in the Funis, the Child, if alive, is not eafily recovered. Sometimes a great many Minutes are elapsed before it begins to breathe. Whatever augments the circulating Force, promotes Respiration; and as this increases, the Circulation grows ffronger, fo that they mutually affift each other. In order to promote the one and the other, the Child is kept warm, moved, shaken, whipt; the Head, Temples and Breast rubbed with Spirits, Garlic, Onion, or Mustard, applied to the Mouth and Nose; and the Child has been fometimes recovered by blowing into the Mouth with a Silver Canula, fo as to expand the Lungs.

Your first Direction is, 'If the Air does not immediately rush into the Lungs, and the Circulation continues between it and the Placenta, the Operation of tying and cutting (the Chord) must be delayed, and every Thing tried to stimulate, and sometimes to give

Pain.

Here you have contradicted what Bonaciolus, Akakia, and Mercatus, have directed, without any Reafon assigned; and I must likewise remark, that as the Authors above-mentioned were Strangers to the Laws and Manner of the Circulation of the Blood, they were not so capable of giving a Reason for what had been found, by repeated Observation, to be the most salutary Practice; which, since the Improvements made in Ana-

tomy, and fince the Circulation of the Blood has been found out, and the Use thereof more known, may be easily accounted for, as I shall explain in the Sequel.

You feem to found this Practice of yours upon the chimerical Notion that the Placenta does the same Office before the Child breathes, that the Lungs do after Respiration begins: For (n), you say, 'That the Umbilical Veffels are supposed to do the same Office in the Placenta, which is afterwards performed in the Lungs by the pulmonary Artery and Vein, until the • Child is delivered, and begins to breathe; and this Opinion feems to be confirmed by the following Experiments.

First, 1 If the Child and Placenta are both delivered fuddenly, or the last immediately after the first; and if the Child, tho' alive, does not yet breathe, the Blood may be felt circulating, fometimes flowly, at other Times with great Force through the Arteries of the Funis to the Placenta, and from thence back

again to the Child, along the Umbilical Vein.

Secondly, When the Veffels are Alghely pressed, the Arteries swell between the Pressure and the Child. while the Vein grows turgid between that and the Placenta; from the Surface of which no Blood is observed to flow, altho' it be lying in a Bason among warm Water.

Thirdly, As the Child begins to breathe, the Circulation, tho' it was weak before, immediately grows ftronger and stronger, and then in a few Minutes, the Pulfation in the Navel-string becomes more languid, s and at last entirely stops.

Fourtbly, If, after the Child is delivered, and the Navel-string cut, provided the Placenta adheres firmly to the Uterus, which is thereby kept extended; or if the Womb is still distended by another Child, no more Blood flows from the Umbilical Vessels than what feemed to be contained in them at the Instant of cutting; and this, in common Cases does not exceed the

Quantity of two or three Ounces.

Fiftbly, And finally, when in consequence of violent Floodings, the Mother expires either in Time of Delivery, or soon after it, the Child is sometimes found

alive and vigorous.'

It may not be improper in this Place, before I proceed any further, to shew what the chief Use of the Lungs is. One great Use then is to mix the Blood, Chyle, and other Humours at every Inspiration and Expiration of the Air, and to break their Viscidity, which the Motion of the Lungs is well adapted for; and at the same Time to admit such necessary Parts contained in the Air, into the Blood, without which an Animal can't long exist. These being the two chief Benefits the Lungs afford us, I shall now proceed to examine, how far your Arguments prove that the Placenta can answer the same Purpose in a Child before its Birth.

First, then the Force of your first and second Arguments proves no more than that there is a Circulation carried on betwixt the Child and Placenta; and the same Method will shew there is likewise a Circulation betwixt the Toes or Fingers and the Heart, but does not prove from thence, that they perform the Office of

the Lungs.

Your third Argument will prove as ineffectual as the two first, and does not in the least shew that the Placenta performs the Office of the Lungs as above described. Because any Person, ever so little versed in Business, knows that when the Child's Head has been greatly and long compressed, the Circulation is weak; and as the compressing Force is lessened after Delivery, the Circulation grows stronger and stronger. This is the Case of a new born Child, whose Head has been squeezed in the Passage, which soon resuming its Form, the Circulation grows stronger, and as that increased Force is exerted, it drives Part of the Blood into the Vessels of the Lungs, and as they open, the Blood gets a freer and shorter Passage through them; whereby

whereby they are enlarged, and the Motion through the

Umbilical Veffels grows more languid.

Your fourth Argument only proves, that by cutting the Umbilical Chord, the Circulation in the Placenta ceales, and will not the Circulation ceale in a Leg or an Arm when cut off? and will any Person thence conclude, that a Leg or an Arm does the Office of the Lungs?

Lastly, you say when the Mother expires, either in Time of Delivery or foon " after it, the Child is fome-

times found alive and vigorous.'

This only proves that the Circulation in both Mother and Child depends upon the Motion of their respective Hearts and Vessels; as I have fully shewed in my Essay on Midwifry. Besides the latter Part of your Argument is very remarkable; for how can a Child be found alive and vigorous in the Womb when the Woman expires foon after Delivery? Moreover there is no Occasion for the Placenta to refine the Blood of the Fœtus in utero; because the Fœtus does not receive Chyle, but digested and well mixed Humours from the Mother, which have imbibed the neceffary Qualities from the Air through her Lungs; and therefore the Child unborn has no Occasion for any Part to perform such an Office; whence on that Account the Placenta would be useless.

From all which it plainly appears that you have not avoided all vain Hypotheses, Number II. and also that your Instructions are not so clear and perspicuous, nor your Remarks so judicious and bappily deduced, as the Review Writer has informed the Public, Number III. But to

return.

You next tells us "that whatever augments the " circulating Force promotes Respiration." Application to the Part itself must be of more Service than when more remote; the Naval String should be immediately tyed to prevent the Blood from passing that Way; by which Means the Heart will drive it sooner into the Lungs, than if the same Quantity of Blood had two Outlets or Ways of passing; whence there there must be some greater Motion in the Vessels of the Lungs, than before such Ligature, and this is consirmed by the Observations of the Authors above-mentioned; "Unde Obstetrices peritiones reprimunt intro de Umbilico sanguinem, quo sacto statim Insans, qui modo exanguis deficiebat, recreatur, vitæquè resistivitur." Hence also it appears your Instructions are so far from being clear and perspicuous, that you have in this last Case brought a strong Argument against yourself, and which also proves that your Remarks are not so judicious and bappily deduced, nor your Practice so unexceptionable as the Review Writer, Number III. would make us believe: but more of this hereafter.

The last of the Authors in Spacbius's Collection is Ludovicus Mercatus, Physician to Philip the Ild. King of Spain. And although you give us some Extracts as from him, wherein, I think, you have also mistook the Author's Meaning, yet as they are not very material, I shall not regard them. You then fay (q) "having thus given " a short Sketch of the Authors collected by Spachius, "I return to Pareus, who directs us to bring away the Secundines immediately after the Child is deli-" vered." But you have omitted to give us the remainder of the Paragraph; which should feem like an Imitation of your Delign in the Omission if you had ever feen the Original. For he proceeds thus (r) Molli fi fieri potest Umbilici Tractu. Quod si sic non · licer, Obstetrix, oleo inunctam manum blande in Uterum immittet, ducem secuta Umbilicum, sicque comprehenses secundas, si adhuc hæreant Utero, leniter hac et illac concutiet, ut sic excussas leniter educat, non autem violentius extrahat, ne una sequens 6 Uterus procidat. Si qui una cum Secundis in Utero fublint sanguinei Thrombi, hos una eademque opera · Obstetrix revellet, et ad ultimum minimumque usque persequetur.

<sup>(9)</sup> P. 52. (r) Cap. 18. Spachjus P. 413.

You have likewife omitted to tell us, that he (3) open'd several pregnant Women, tenellos adhuc Fætus, quales quadrini sunt, figura orbiculari sitos, capite ingenua reclinato, geminis manibus sub genubus, calcibus vero ad nates junctis?" of which I shall have occasion to take notice in another Place. You then add (t) "Cotemporary with him (Pareus) was Jacobus Rueff, who practifed at Frankfort, and in his Writings recommends the Method of the Antients; a Circumstance from which we learn, that the Improvements had not then reached Germany." You told us before, (u) that this Author was the first that gave a Draught of the Speculum Matricis, which was then looked upon as an Improvement; and you also mention several other Things, as Amendments in that Author, of which I took notice in my former Remarks: whence it is demonstrable you must have taken Things from others, without ever thoroughly perufing the Originals: or you could never have brought Jacobus Rueff at Zurich and Frankfort to prove there were Improvements made in Midwifry, and again produce the same Jacobus Rueff, who practised at Frankfort, to shew that the Improvements had not then reached Germany.

You tell us (20) that Jacobus Guillemeau was the next 'Author'; but you have omitted to acquaint your Readers, that he orders Women to be delivered immediately, when they flood; and that he had feen Wombs built in Labour, of which I don't remember you have ever taken the least Notice through your. whole Book; as if fuch Misfortunes were not worth remarking actions of he surrous selling

I have now made my Observations upon the Antients, and old Moderns, as you call them, down to the fixteenth Century, no less than thirty-three in Numbers, including your Lithopedus Senonensis. To have perused all the Works of so many Authors, would in-

<sup>(</sup>i) Cap. 14. Spach. p. 410. (t) P. 54. (u) P. 48. and of this p. 19. (w) P. 54. deed Balduses

deed require much Time and Opportunity; but when your Readers find the Sum Total is contained in ane fingle Volume in Folio; a few Pages taken from Le Clerc's and Friend's History of Physic excepted, as before observed, their Wonder will soon cease; and more especially when I tell them that from the Time that Guillemeau published in 1582, to the Time Mauriceau appeared in Print in 1668 (being upwards of four fifths of a Century) you have not continued down the Series of Writers, for want of another Spachius to affilt you, whose Contents indeed you, or the Person you copy from, may have feen, but can never pretend to have examined or understood. However, although you have left fo great a Chasm; I can affure our Readers, that they may find feveral Things in the Writers of the fifteenth and fixteenth Centuries, before Mauriceau's Time, worthier of Notice, than many, which you have produced, as Haller will inform them. And in case they should be desirous of seeing that Part of the historical Account continued, which you have omitted. I will exhibit a few Authors, who wrote upon different Branches of this Part of Medical Learning. during the Interval of Time above-mentioned: That when the Readers have perused Spachius, they may know where to apply for farther Affistance; and where they may find more Matter to enable them to judge for themselves and regulate their Practice by, than what you have given them in your Treatise on that Subject.

Fætu, in Venice in 1571, and in 1595, he was the first Person (I think) that denyed there were any Anastromoses betwixt the Vessels of the Womb and those of the Fœtus; he describes the 'Sphincter Vaginæ and

Placentæ-membranam obverfam utero.

Jasonis Pratensis de Uteri Morbis in 1549.

'Johan. Baptista Conanus, published in 1572. monuit in Gemellis unam Uteri caveam esse, leviter in dextram et sinistram divisam"

<sup>&</sup>quot;Constantius Varolius; in 1575. Clitorides serè majores esse, quas pro Hermaphroditis habeant, mo-

bis Infantum, Grandarum et Puerperarum in 1593," in which are Drawings of Several Crotchets, and other Instruments.

Horatius Augenius gives us also an Account of, what you call Lithopedus Senonensis; in 1595, in Octavo.

'In Severinus Pinæus (Pineau) de Graviditate et partu

mulierum in 159% anied) bod 1 mi initia ni bouse

Andreas Libavius published a Treatise de Vagitu expresso Fœtus in Utero, Norimberg, 1597. Instances of which may be found in the Philos. Trans. Number 324, and in the Act. Erudit. 1686.

In the 16th Century several Authors wrote very well upon our Subject, some of the chief are Alexand.

Massaria de morbis mulier. Conceptu et Partu in 1600.

Fred. Bonaventura, who published in 1601.

Johan Jessenius, Jessen a Jessen Eques Ungar in 1602.

Rolleric. a Castro de universa muliebrium morborum,

Medicina. 1604.

Riolanus, jonr. in 1608. of a field to Hiw. I abothere

Julius Cofferius, in whose Tables you may see the Valvolæ, et media Eminentia Cervicis Uteri; which are also in Spigelius 1627.

Rudolphus (Le Maitre) Magister in 1613.

Hestoris Diascepsis Anatomica de Vasis umbil. et secundinis, in 1608.

Franciscus Plazzonius, de Partibus mulierum generationi inservientibus in 1621; where you may find the Lacunæ described.

'Jobannis Conradi Rhumelii, de Humani Partus na-

tora, Temporibus et Caufis differtatio 1624.

Adrianus Spigelius de Formato Fœtu, &c. extat in Plazzonio.

Gregorius Nymmannus de Vita Fœtus in Utero 1628, wherein he proves that the Child may live in the Womb, after the Mother is dead: This is also in Plazzonius.

Alphonsus a Caranza, a Spaniard, wrote very accurately upon Midwifry in 1629.

Michael

[ 31 ] Michael Rupertus Besterus, who died in 1661, has well described the Ova Moliebria; and mentions a Case where the Uterus was two Inches thick. In the Obfervations of Louise Burgeois, in 1642, are many useful Things, with Defcriptions of various human Ova. Du Verney, ex Vans Uteri via in Uterum, glandulæ Ureri, in Philos. Tranf. Number 26. Uterus Puerperize in Number 269, Uterus Gravidus ejusque Glandula, Number go8.

C. Bartholin. describes the muscular Fibres of the Uterus, and the Glands on the Sides of the Vagina: but chiefly from Du Verney's Experiments. '7. Peys-Gonel Temporibus Humani Partus Secundum Hipp.

1666.

From all these and many others you might have continued your summary Account with the Improvements made during the great Chasm, which you left, for the Space of near a whole Century; whence it is evident, that your Readers cannot at once fee from your Extracts the whole Extent of the Art, among the Antients, with the Improvements made in it from the Time of Hippocrates down to the Time of Mauriceau, as you have told us; which the Writer in the Review, Number I. has ecchoed again, and endeavoured to confirm; which is no doubt a very strong Proof of that Writer's being Master of the Subject. Your Omissions of the Improvements made by the Moderns also, or of some of those Authors, who wrote in this Century, I shall shew hereafter, and now return to your Introduction again.

In Page 55 you tell us Mauriceau published in 1668, after an extensive Practice for several Years. In the next Page you fay, 'He invented a Tire-Tete, which cannot be applied until the Skull is open'd;

consequently can't save the Child: and granting the Feetus to be dead, other Methods are much more ef-

fectual. But I believe I shall make it appear in Section 21. that his Method is not only as effectual as fome you have mention'd, but more expeditious, and is at the fame Time attended with less Hazard to the Woman than yours.

After Mauriceau, you tell us nothing material of any Writer 'till you come to Henry Daventer, as you call him; but his real Name was Deventer, as you might have feen had you consulted the Original. After postponing the Time of the Publication of his Book for a Year; you proceed to bring your Arguments, by which the Review Writer Jays, Number 3. you have rectified certain Mistakes of Daventer touching the different Situations of the Uterus. These Arguments I shall exhibit in your own Words: and then shall endeayour to prove that they are not so clear and perspicuous, nor so judiciously and bappily deduced as that Writer, Number 3. tell us.

In Page 60, you fay 'he (Daventer) pretends to have made several useful Discoveries, which seem

feafible enough to those, who have not had the Opportunity of an extensive Practice; such as the Side

or wrong Politions of the Os Internum and Fundus

Uteri, which (according to him) are chiefly the Occasion of lingering, difficult and dangerous Labours:

· He seems to be led into this Mistake, by supposing

that the Placenta always adhered to the Fundus

· Uteri. As to the Difficulties proceeding from the wrong Polition of the Os Internum, a Practitioner

would be apt to believe he had never waited for the

· Effect of the Labour-Pains, which generally open it.

by pushing down the Waters, or Head of the

· Child.

'He was feldom call'd, except in difficult Cases, often proceeding from a difforted Pelvis, which is common in Holland; when this is the Case, the · Head of the Child is commonly cast forwards over the Pubis, by the jetting of the Sacrum: or if one Ilium is higher than the other, the Os Internum and Fundus are thrown to different Sides; but then the chief Difficulty is owing to the Narrowness of the · Pelvis. The Uterus is very seldom turned so oblique as he supposes it to be; or if it were, provided the

" Child is not too large, nor the Pelvis too narrow, I never found these Difficulties he seems to have met

with: And should the Labour prove tedious, on account of a pendulous Belly, by altering the Woman's

· Position, the Obstacle is commonly removed.

For Example: Let her Britch be raised higher than her Shoulders; she may be laid upon her Side, in a præternatural Case, when it is necessary to turn and deliver the Child by the Feet. Nevertheless though he has run into Extremes about the wrong Positions of the Uterus, in which he is the more excusable, as he had the Fondness of a Parent for a Theory, that he alledges was his own, yet there are some useful Hints in his Book, particularly that about Floodings in which he directs us to break the Membranes, in order to restrain the Hemorrhage; and his Method of dilating the Os externum.

First you say; Deventer pretends to have made several useful Discoveries, which seem feasible enough to those, who have not had the Opportunity of an extensive Practice; such as the Side or wrong Positions of the Os internum and Fundus Uteri, which (according to him) are chiefly the Occasion of linguing,

difficult, and dangerous Labours."

That different Persons may find out the same Thing is no Wonder; and although others have mentioned the Obliquity of the Womb, as a Cause of tedious or difficult Labours, long before Deventer's Time, yet if he had never heard of or seen any Account thereof, he may be said to have made one useful Discovery without being called a Pretender to such Knowledge; especially as he has drawn more just Consequences from it than any of his Predecessors.

We find that Hippocrates (x); takes notice of the Obliquity of the Womb: For he says, π ω το ισχίου λεχοῦ καταστηρίξωσιν, ἀιτε ὑτίραι εἰς τὸν κινεῶνα, προτίθεσθαὶ χρη προς τὸ ὑγιὰς ἰσχίου, ἔλαιου αἰγύπτιου λευκὸυ, η βακκὰριται, καὶ επὶ τὸ ὑγιὰς ἰσχίου κατακεισθω. 'Si puerperæ Uteri ad coxendicem aut ad Lateris inanitatem (y), incubuerint, ad sanam cox-

endicem

Lateris, that is the Space betwirt the Thorax and the Hia on each Side; which shows that the Womb must, at this Time, be in a pregnant State, for it could never be so high in the Abdomen, in any other natural Way.

f endicem oleum Ægyptiacum album; aut Baccarinum unguentum admovere oportet, & in sanam coxendicem decumbat. And in other Places he says (z); καὶ ἢν ἀρῆ τῶ δακτύλω ὅξη τὸ ςόμα το τω ἰσχίω. Ac si digito contigeris os in coxendice deprehendes. And this he often takes notice of in an unimpregnated State.

We likewise see that Rochaus, in Spachius, (a) as taken from Ægineta (b), who, according to Moriceau, lived about A. C. 380; Le Clerc fays towards the latter End of the fourth Century; and Wolfgangus Justus (c) fays he flourished under Honorius, and Theodofius junior, about A. C. 420, but Friend brings him down to the seventh Century. This Author, I say, so long ago, tells us, 'Si Os Cervicis Uteri obliquum fuerit difficillime pariunt, which, as I observed before, you omitted to acquaint your Readers with; and had you been conversant in the History of Physic from the Time of Spachius down to this Century, you might have known that Sennertus (d), speaking of these Things, fays, Dum Uterus rectum fitum non habet, & propterea ejus os comprimitur; and C. Bartbolin also, long before Deventer's Time, observed that the Womb inclined sometimes to the right Side, and sometimes to the Left; for, fays he (e), 'In medio locatus est Uterus, ad nullum inclinans latus, nisi aliquando, dum gestat mulier masculum aut semellam : tunc enim dextrum aut finistrum magis occupare solet, quanquam non semper. De Graaf (f) assures us, it was the received Opinion among the Anatomists of his Time; for he says, 'Non semper in medio præcise collocatur (Uterus) sed quandoque, licet rarius, illum nunc magis versus dextram, nunc magis versus siniftram Hypogastri partem situm offendimus; quod præsertim in prægnatibus ab aliis Anatomicis notatum 'invenimus.'

Whoever will be at the Pains to confult Messieurs

<sup>(</sup>c) Pa. 565, Lin. 43. (a) Cap. 27. P. 103. (b) Lib. 3. Cap. 76. (c) Chron. Med. (a) Pract. Lib. 4, Part 2d Sect. 6. (e) Lib. 1. Cap. 23. P. 162. (f) De Part. Mulier. P. 232, 323.

Pen (g), Amand, (b); and La Motte (i) will fee that these Authors have observed this Obliquity; and affigned it as a Cause of difficult and laborious Births: And Mauriceau (whom you acknowledge (k), had an extensive Practice for several Years) is very particular in the Matter. In his Observations he has given us several Histories of difficult Labours, proceeding from the bad Situation of the Womb; he tells us of one (1), whose Womb was inclined forward like a Bag to the Middle of her Thighs; he was obliged to twift his Arm, in order to bend it over the Os Pubis of the Mother, and fearch for the Child's Feet.' And again he fays (m), 'Another had a very hard Labour, because, as the Child was altogether to the right Side, her Throws could not answer in a direct Line, that is, they could onot press directly on the Orifice of the Womb; whereby it is evident Mauriceau knew the Influence a direct or oblique Situation of the Womb had on easy or natural, and præternatural Labours. And I have, in my Essay on Midwisery, not only given the Cases mentioned by other People, but have shewn how the Obliquity may happen; and mentioned two Cases: In the first (n), 'I found the right Side of the Os Uteri exactly in the Centre of the Pelvis, and the left Side quite up above the Top of it; and the Fundus Uteri was mostly on the right Side.' I mentioned another Case (0), where I found 'the Os Frontis of the Child was ftrongly thrust against the Os Sacrum, and that "I could only touch one Side of the Os Uteri, viz. that next the Os Pubis.' An Instance of the like Kind I fince met with in December, 1751, but the Abdomen was not quite fo prominent as in the last mention'd Case; although the Foreside of the Os Uteri was pushed down below the Pubis.

Heister (p), whom you commend (q), has carefully collected the Opinions of most Writers on the Subject and lays it down as a Rule to be observed in Practice.

<sup>(</sup>g) P. 285. (b) P. 19 and 24. (i) P. 322. (k) P. 55. (l) Obf. 18. (m) Obf. 683. (n) L. 78. p. 172. 176. (o) P. 179. (p) Cap. de part. diff. (q) P. 67.

For he advises the Operator to introduce a Finger into the Vagina, thereby to learn in the Beginning of Labour, which Way the Mouth of the Womb is fituated; whether it inclines to either Side, or is disposed directly

in the Middle of the Pelvis.

P. 230.

Gottfrid. Wilbam. Muller wrote expressly 'de Situ Uteri obliquo' in 1731, as did also Ad. Bernh. Winkler in 1745, who takes notice, that it was observed of old. And Mesnard, whom you also commend (r), inculcates (s) the same Doctrine; and gives many Instances of difficult Labours proceeding solely from this Cause.

How judiciously then is this Obliquity of the Womb characterised by you as only a Pretence or Whim! when it has been taken Notice of by so many Persons; some of whom you allow to have had an extensive Practice. Strange! I own, it is, to me, that a Person, who is endeavouring to shew how conversant he is with Authors, should upon his bare Authority call in question a Point of Practice fo univerfally received, and so often taken notice of by some of the most eminent Writers in Midwifery; nay, and venture to stigmatize the Gentlemen who inculcate this Doctrine, as Pretenders only to such Skill; when it is an allowed Truth, and I appeal to all judicious Practitioners, if many difficult Labours do. not arise solely from this Cause; and that the perfect Knowledge of the different Obliquities of the Womb is one fure Method to direct the Operator to the speedy and successful Practice of this Art. The two Observations already cited from Mauriceau would suffice to convince the practifing Reader of this Fact. But yet to clear up this Matter, I can, with the strictest Truth affirm, that this was the Opinion of these great Men, whose Hearer I had the Honour to be, viz. the immortal Boerhaave, (as all those who have had the Happiness to be educated under him, will, I am confident, readily affert) M. Albinus, Public Professor at Leyden, and Meffieurs Gregoire and Duffe at Paris; and I can with the same Truth affirm, that it is the unani-(r) Introduct. P. 67, & in p. 364. (s) Guide des accouchmens

mous

mous Opinion of all the best Accoucheurs of Character in these Kingdoms. For as I had frequent Opportunities of conferring and corresponding with several of the greatest Men in that Profession; so for my own private Satisfaction I have had this Matter cleared up to me long fince; and I have had several Opportunities in my own Practice, of, not only being confirmed in the same Opinion, but also of convincing others: And I will also appeal to the Gentlemen in London, indisputably the first in the Profession in this Kingdom, and as deservedly eminent in every other Branch of Physic, whether they, in the Course of their Practice, have not frequently met with this Obliquity of the Womb; nav. even the Women too will, I'll venture to fay, agree with me in this, that they fenfibly perceive the Child does frequently incline more to one Side than to the other. And Dr. Southwell, in his Remarks upon Ould (t), fays, that Mefficurs Hanauld (Member of the Royal Academies of Paris and London, and Royal Professor in the King's Garden in Paris.) M. Winslow, well known to the learned World by his Treatifes of Anatomy and Surgery, and Member of the Royal Academy of Paris and Berlin; and all his Acquaintance were of the fame Opinion.

Now after such indisputable Authorities, how can you call in question the Veracity of so many honest and learned Men, who assure us they frequently meet with this oblique Position of the Womb, in the Course of their Practice? And altho Deventer was not the first who observed it to be one Cause of redious and difficult Labours, yet he was the first who has drawn more just Consequences from it, and considered how far the Knowledge of this was capable of improving the Art of Delivery, than any of his Predecessor; which was greatly applauded by many Persons of Note, as appears by their Letters that are published at the Beginning of his Book. But how much more conspicuous must your Error appear, when the Reader finds in Deventer, that the Universities of Groningen and Leyden

were lavish in their Praises for the thorough Knowledge and Improvement of this fame Obliquity, which you characterise a pretended useful Discovery? Moreover, Deventer's Book has been approved of by the Faculty at Paris, as appears by the French Translation, as well as by the two Universities already mentioned. It was likewife dedicated to the greatest Physicians of the Age; the first Part to the King of Denmark's first Physician; the fecond Part to Meffieurs Boerhaave, Oosterdike, and Albinus. Men of univerfal Character, and Professors of Physic in Leyden. The French Translation is dedicated to M. Chicoyneau, first Physician to the King of France; all of whom, I humbly prefume, will be allowed to have been competent and unbiaffed Judges of the Point in question; which I fancy cannot be said with equal Truth of your Approvers; who, in the Monthly Review. Number III. have boldly afferted, that you have rectified certain Mistakes of Deventer, touching the different Situations of the Uterus, without any other Reason or Argument than a 'Gratis Dictum' being brought against the Experience of so many learned and able Practitioners, who all unanimously proved the very contrary to what you have thus boldly advanced.

I think it is not altogether consistent with that Candour and Moderation which runs through your Book, as we are told by the Review Writer, to say, that this Obliquity of the Womb may seem feasible enough to those who have not had the Opportunities of an extensive Practice. Methinks it approaches very near to Arrogance and Vanity to infinuate, that all those who differ from you, and give Credit to Deventer, have not had an extensive Practice; and also, on your own sole Authority, to oppose a Point of Practice received by the most eminent Practitioners then living; and so strongly confirmed by others, your Cotemporaries, who in difficult or præternatural Cases may have had, at least, as exten-

five a Practice as your felf.

Secondly, You tell us, (u), 'As to the Difficulties 'proceeding from the wrong Polition of the Os Internum, a Practitioner would be apt to believe he (De-

wenter) had never waited for the Effect of the Labour Pains, which generally open it, by pushing down the Waters, or Head of the Child.'

As a Practitioner, I can make no other Conclusion from this Paragraph, than that it rather shews your Want of Candour to Suppose, that Deventer, who was so eminent for his obstetrical Skill (as the following Extract from the Republic of Letters for July 1701 will shew us) should be so ignorant as not to wait for the Effect of the Labour-Pains. For it is there faid (w), Entre les autres de M. Deventer qui lui ont acquis une ofi grand Reputation dans ces Provinces (Holland) & qui Lui attirent des Patient du Fond de L'Allemagne, 'il a encore celui d'entendre tres-bien l'Art d'Accoucher les Femmes, qu'il pratique avec beaucoup de succes.' Whence we find, that he acquired fo great a Reputation, that People even from Germany employed him. And I am certain, that no Person who reads his Book, can thence with Candour draw fuch an Inference as you have done: For he adds (x), "If the Women Midwives do not succeed (in delivering Women, when the Womb is a little inclined) their Refource must be Patience, and altho' they do not succeed, and the Woman has had the good Luck to be delivered after many Days of hard Labour, yet the Midwife is not one Whit the wifer, because she knew onot the Cause of the Delay.' From whence it is very plain, that Deventer knew very well the Confequence of waiting for the Effect of the Labour-Pains.

In the next Place, whenever the Uterus is displaced in the Manner mentioned, every Practitioner knows, that the Waters cannot replace it; and therefore their pushing down the Bag; will be nearly the same as when the Child lays crofs-ways, and does not prefs to dilate the Os uteri, and therefore the Bag presents like the End of a long Gut, rather than as an inflated Bladder. Befides, when the Uterus is fo misplaced, as neither Child nor Bag can advance far, the Membranes then being unable

<sup>(</sup>w) Pref. to the French Translation, p. 22. (x) Chap. 48. ridition.

to bear the whole Force of the Mother's Throws, are soon burst, because the Waters are the only contained Parts that can be propelled; and that Part of the Bag which can yield, can only press against one Side of the Os uteri, and therefore cannot dilate it equally. You seem to be conscious, that pushing down the Waters, or the Child's Head, in this Case, by the Labour-Pains, will not always succeed, because you make use of the Word generally, instead of always, which is an Implication, that sometimes Deventer may be right.

Thirdly, Your next Argument you bring to prove Deventer must be mistaken is, because (y) 'He was 'seldom called, except in difficult Cases;' which, among others might change to be the very Case here mention'd: And is not such a Person more likely to become expert, and meet with uncommon and difficult Cases; than one who is chiefly employ'd in attending common, easy and natural Labours. Whence this is rather an Argument in behalf of Deventer's Opinion,

chan against it. The ad will send a said way as greated it

Fourtbly, Your next Argument brought to confute Deventer, proves likewise the Reverse of what you would have it. For you say, that difficult Cases in Holland commonly proceed from a differted Pelvis.' That this Argument might have answered your Purpose, your fhould have proved, that a difforted Pelvis cannot misguide the Uterus; whereas it generally, if not always, misplaces the Womb; as is evident from the Touch. For whenever any Person can only find one Side of the Uterus, near the Center of the Opening into the Pelvis, and that the other Side is very high up, he may be certain that the Uterus is misplaced, whether the Pelvis be difforted or not; and then, generally, there is Part of the Os Uteri and Vagina folded or hanging near the Center of the Pelvis, especially when the Fundus hangs over the Pubis; which shows the Dangers of using the Sciffars, that you so frequent ly recommend to your Pupils.

Fiftbly, you proceed, 'When this is the Cafe (a) distorted Pelvis) the Head of the Child is commonly cast forwards over the Pelvis, by the jetting of the Sacrum; or if one Ilium is higher than the other, the Os Internum and Fundus are thrown to different Sides.'

This Argument proves likewise what Deventer asserts, which you have effectually done by producing a known Fact: 'But even then, you say, the chief 'Difficulty is owing to the Narrowness of the Pelvis.' Which will not hold good. For if one Side of the Pelvis be higher than the other, although the Brim be of the usual Diameters; yet that Side will direct the Child from the Center, so as to make the Head pitch against some Part of the Pelvis instead of going through the middle. This is evident, because upon turning the Child, and bringing the Feet first; the Head passes with ease, which it would not do was the Brim too narrow.

Hitherto you have been attempting to prove that Deventer only pretended to have made an useful Discovery; but you are so far from bringing any Argument to support your Accusation; that your Prejudice has carried you beyond your Reason, and sorgetful of what you had advanced before, you have proved Deventer's Opinion to be well sounded; and in the Sequel confirm it: So far are you from having restified certain Mistakes of Deventer as the Review Writer tells us, No. 3: that you also contradict yourself in many Places; and even acknowledge, that the Womb may be misplaced.

You tell us, (2) 'That the Uterus is very feldern' turned so oblique as Deventer supposes it to be; or if it were, provided the Child is not too large, nor the Pelvis too narrow, Fnever sound those Difficulties, which he seems to have met with.'

Here I must remark, that you seem to be convinced, that the Uterus may be oblique, even as Deventer re-

wolad!

lates it; but notwithstanding, if the Head be not large, nor the Pelvis strait, then you never found those Difficulties be seems to have met with. Which, in my humble Opinion, is saying no more, than that, when the Pelvis is large enough, and the Child's Head small, then there is not so much Difficulty; as when the first was narrow, and the last large: Neither does Deventer make so much Difficulty as you have told us, because in that Case the Child may easily be turned and

brought away by the Feet, but a sample a visualistic

In the preceeding Paragragh, you have endeavour'd to represent what Deventer says, as a very slight and trissing Observation; but in the very next Sentence you say, 'And should the Labour prove tedious, on 'Account of a pendulous Belly, by altering the Wo-man's Position, the Obstacle is commonly remov'd.' Here again you seem to allow that Deventer may be right, but that you would make no Dissiculty in delivering the Woman; 'by only altering her Position,' which will not so readily answer the End unless you bring the Child by the Feet; because, in that Case, the abdominal Muscles are so over-stretched that they cannot add so much to the Mother's Throws, as otherways they would do.

Forgetful of what you told us before, you say (a)

That Women in the last Months must not be too strait

wathed; lest the Womb should be determined, in

stretching over the Pubis, and produce a pendulous

Belly; which is often the Cause of difficult Labours.

Is it not then evident, that the Danger arises from misplacing the Womb; which is the very Thing, you say, Deventer pretends to have discovered: And, in another Place, you are obliged to acknowledge what Deventer said, to be true; for you tell us (b)

In the Ninth Month, the Fundus Uteri rises even with the Scrobiculum Cordis, except in pendulous

Bellies: But all these Marks may vary in different

Women; for when the Belly is pendulous, the Parts

below the Navel are much more firetched than those above, and hang over the Os Pubis; the Fundus then will be only equal to a little higher than the Navel.' Yet, notwithstanding this, you again (c) fall foul upon Deventer, telling us, that He alledges that preternatural as well as laborious Cases proceed from the wrong Position of the Os and Fundus Uteri; which you treat as a ridiculous Notion, and then acknowledge, that you sometimes, indeed, meet with pendulous Bellies, in which the Os Uteri is turned farther back than usual; and you likewise acknowledge the Os Internum is in a streight Line with the Fundus Uteri, which consequently must then be misplaced.

You have here endeavoured to make your Reader believe that Deventer 'Alledges that præternatural, as 'well as laborious Cases, proceed from the wrong Position of the Os and Fundus Uteri.' But he is so far from such an Attempt. (d) that he says, 'Difficult Births arise either from the Mother, from the Child, or 'from the Midwise;' and proceeds to give the various Causes, and how to remove 'em all, contain'd in 18 Chapters (e) but those caused by a Male Situation of the Womb are contain'd only in 3 Chapters. (f)

Here you tell us, 'We fometimes indeed meet with pendulous Bellies, in which the Os Uteri is farther back than usual; but, before (g) you told us, Pendulous Bellies are often the Cause of difficult Labours: So that according to your own Words, There are fometimes indeed, pendulous Bellies, which are yet often the Cause of difficult Labours, whence it is not so evident, as the Review Writer says, No. 3, that your Instructions are very clear and perspicuous, and that your Remarks are judicious and bappily deduced.

You then proceed to tell us here, 'that even in these Cases, when the Head is not very large, nor the Pelvis narrow, and the Woman is vigorous, and the Labour-pains strong, the Woman, with a little Pa-

<sup>(</sup>c) p. 308. (d) cap. 25. (e) from 27th &c. to 45 inclusive. (f) chap. 46, 47, 48, and fomething mentioned chap, 3. part 2d. (g) p. 151.

tience, is, for the most Part, delivered without any the other than common Assistance. If the common Assistance will do, how happens it that (b) these pendulous Bellies are so often the Cause of difficult Labours; which must require more than common Assistance?

However, you go on thus, 'Or flou'd this Case, '(which is often the Cause of difficult Labours (i) and the Woman, is, for the most Part, safely delivered, by the Assistance commonly given in a natural Way.)

(k) Shou'd it, you say, prove tedious, she may be assisted in Time of Pain (l) by introducing one ortwo Fingres into the Os Uteri, and gradually bring it forwards.'

In this short Paragraph, I think, you have erred twice; for first, the Fingers' are easier introduced, both for the Operator and Woman, during the Intervals between the Pains: Secondly, the Womb can't be pulled right by this Method, because it is not one folid firm Body, like a Barrel or an Egg, therefore, bringing one Side of the Os Uteri forwards as little a Space as it can yield, will not affect the Fundus Uteri: but may hurt or tear the Part pulled at; neither can it alter the Situation of the Child in the Womb. And. thirdly, as in this Case, one Side of the Os Uteri, and perhaps Part of the Uterus, may be come down, betwixt the Os Pubis and Child's Head, it will streighten the Passage, and it cannot be brought forwards, on Account of the Bones, but ought rather to be pushed up above the Pubis, during the Intervals between the Pains. and be there detained while the Throws are strong.

You say (m) 'Nevertheless, tho' he (Deventer) has 'run into Extremes about the wrong Positions of the 'Uterus, in which he is the more excusable, as he had the Fondness of a Parent for a Theory, that he alledges was his own yet, there are some very useful Hints in his Book, particularly that about Floodings; in which he directs us to break the Membranes, in order to restrain the Hemorrhage; and his Me-

<sup>(</sup>b) 151. (i) p. 151. (k) 193. (l) p. 302. (m) p. 62. thod

thod of dilating the Os Externum ! Monfr. Bruier d'Ablaincourt (n) says, Les Figures ne sont pas le feul Advantage qu'ait l'ouvrage de M. Deventer sur ceux dont nous venons de parler; le Grand Principe de l'Obliquité de la Matrice, qu'il etablit ; des Indications tires de l'Accouchment & de la Figure des Eaux, et le caractere distinctiff des Doleurs Fausses et veritables, sont Toutes Observations qui sui sont propres. The grand Principle of the Obliquity of the Womb, which he has established; the Indications taken from the Touch and from the Figures of the Waters; and the Diffinction between the false and true Pains, are all Observations proper to bim? But you feem to have allowed one more, by faying, he directs (in Floodings) to break the Membranes in order to restrain the Hæmorrhage.' Which you have applied to a very different Use than what the Author meant; as is evident from what he fays, (o) . Un second Signe de la chute du Placenta, est la Perte de fang qui l'accompagne, quelquefois même avec tant d'abundance, quelle met la mere, et l'Enfant dans une danger evident, dans ce cas il faut faire fortir 'l'Enfant le plûtôt que fuire se peut :'--He then goes on to tell us how to pierce the Membranes or Placenta; and then to bring the Head to present, or turn the Child, and bring it by the Feet, and fays, Dans l'Etat des choses, il ne faut pas s'amuser; car l'Enfant ne sçauroit une long-tems. C'est pourquoi une Sage-Femme prudente doit le tirer le plurot qu'elle peut, sans précipitation cependant; et aussitôt que l'Enfant est venu, faire l'Extraction de l'amere-Faix, que le le fang caille colle quelquefois si étroitement a l'orifice de l'Uterus, ou au vaginqu' on le prendroit pour une excroisance de la partie. A second Sign of the Separation of the Placenta from the Womb, is the Loss of Blood which accompanies it, and fometimes in such Quantity, that both Mother and Child are in Danger. In this Case the Woman must be delivered

<sup>(</sup>n) In his Preface to the French Translator of Deventer. p. 17. (o) cap. 31. p. 180. cap. 33.

immediately. - n thefe Cafes no Time is to be loft, for the Child can't live long, wherefore a prudent Accoucheur ought to extract it as foon as possible, with Safety, and bring away the After-Birth immes diately after the Child.' Whence it is very evident you have mistook the Author's Meaning, and have thereon founded a most dangerous Practice, whereby both the Lives of Mother and Child are brought into imminent Danger. For altho, he fays, the Flooding abates upon the Evacuation of the Waters: yet, you fee, he advises, that the Woman shou'd be delivered immediately; which he afterwards repeats (p) il la faut accoucher promptement, et sans attendre à l'extrêmite, sur tout, si l'on connôit par l'attouchement, que le Placenta est tombé a l'orifice. Si le Placenta détache cause l'Evacuation; les Remedes sont inutiles. L'Operation seule peut l'arrêter. l'Operation, dis-je, fate de bonne heure, si l'on ne veut 's'exposer a voir mourir la Femme entre les Mains de la fage Femme. Dans la cas de cette Hæmorras gie, cette Operation est necessaire en tout état de la e groffesse; mais si elle se fait promptement après le feptiéme mois, il y a plus d'Esperance de sauver la "mere et l'Enfant." 'The Woman (who floods, and s is going to miscarry) must be delivered immediately, without running any Hazards, especially, if by the . Touch the Operator finds the Placenta separated, and at the Os Uteri.—If the Evacuation proceeds from a Separation of the Placenta from the Womb, Medicines are given in vain. The Delivery must stop it, and \* that foon too, unless you would bazard the Woman's dying under your Hands. In case of Floodings, Debivery is necessary in all Stages of Pregnancy; and \* after the 7th Month, the fooner the Woman is de-Ivered the better Chance there is of faving both Mother and Child.' And, in giving us Directions how to deliver the Woman in such a Case, he says, 'L'Orifice de l'Uterus etant ainsi ouvert, si la membrane ons organ with orest

fe presente, il faut la dechirer avec les Doigts ou les ongles. S'il est besoin. Les Eaux s'ecoulent promtement. Pendant ce Tems ou avance la main par l'Overture de La membrane, jusqu' à ce qu'on trouve les Pieds de 'l'Enfant, &c. The Os Uteri being open, if the Membranes present, they must be torn open; when the Waters will immediately gush out, during which the Hand must be immediately introduced to search for the Child's Feet, &c.' From whence it is very evident you have entirely perverted Deventer's Meaning, and have commended him for what he ought to be blamed, had he directed what you have faid he did. Altho' Deventer orders us, when the Woman floods, that she should be delivered immediately; yet he was not the first who advised that Method; for we find that Guilemene (as I observed before) recommended the fame Thing; as every skilful Practitioner has done from that Time to this, and with good Reason. How dangerous then must be that Method recommended by you in the following Paragraph?

You fay, (q) 'It is happy for the Woman, in this Case (Flooding) when she is near her full Time, that that she may be sustained till Labour is brought on; and this may be promoted, if the Head presents, by egently stretching the Mouth of the Womb, which being fufficiently opened, the Membranes must be broke; fo that the Waters being evacuated, the Uterus contracts, the Flooding is restrained, and the 'Patient is delivered.' Your Instructions given in this Paragraph are not so very clear and perspicuous as the Review Writer informs us. For I suppose you mean, that 'when the Patient floods, the Membranes are to be open'd for the speedy Discharge of the Waters, then the Woman is to remain fo for some Time, 'that the Flux may be restrained; and then afterwards she may be delivered.' This, I say, must be your Meaning, as the Words which follow immediately, explain. For you then proceed; 'At any Rate, if the Hæmorrhage returns again with great

Violence, there is no other Remedy than that of delivering with all Expedition. Which implies, that the was not to be delivered immediately after the Difcharge of the Waters, but first to have the Flooding restrained; land then to bring forth the Child some Time after.

Whether you have wilfully misconstrued Deventer's Meaning, and therefore have commended him for advising a Method of Practice follow'd by yourself, or you really mistook him, and have adapted the Method you thought he recommended, I can't take upon me to say; but be that as it it may; the Consequences which must necessarily ensue, call aloud, that your Readers may be set right. For the Dangers arising from this Practice may be said to be threefold; First,

Those arising from a premature Discharge of the

Secondly; from the Uterus contracting too closely about the Child.

And Thirdly; from the Lofs of Blood.

First, then, the Loss of the Waters, before Delivery, has been look'd upon as one Cause of difficult Labours fo long ago as Ægineta's Time, as I mentioned before; which, however, you had omitted to take Notice of (r). For Rochaus tells us, he fays 'Humore figuidem qui in utero collectus fuit, vacuato ægerrime delabetur Embryon propter ariditatem,' I likewife took Notice that you omitted to acquaint us, that Mercatus in Spachius- (s) Says, 'quæ aquam fensim expurgant, difficulter pariunt: dilabitur enim ocius per madidas et lubricas partes Fœtus quam per ficcas.' And this is confirmed by all the best Practitioners down to this Time. The Bag likewife being full, continually preffes against, and extends the Os uteri; which, upon the Discharge of the Waters, frequently contracts again ; especially if the Pains abate or stop, as is too often the Case, particularly in Floodings. For I mentioned in my Essay on Midwifry (t) . As the Expulsion of the Infant is performed by the Contraction of the Dia-

<sup>(</sup>n) Spach. P. 103. Æginet. Lib. 3. cap. 76. (s) p. 1052. Lib. 4. cap. 3. (t) p. 112.

phragm and abdominal Muscles on the Womb, and by a contractile Disposition peculiar to the Womb it itself; it is evident from the Nature of Things, that this united contractile Force decreases in Proportion as the Object recedes from its Instuence, or, in other Words, as the Contents of the Womb are discharged. Wherefore the Membranes should never be broke (if possible to be avoided) till every Thing is prepared for an immediate Delivery. And la Motte (u) observed that the Pains often cease, after the Coming away of the Waters, which is confirmed by daily Experience.

Secondly, from the Uterus contracting too closely, it may compress the Child, and sometimes so as even to ftop the Circulation of the Blood thro' the Umbilical Chord, both which Dangers, the Waters, while in the Bag, defend it from. Whoever confiders in how short a Time the Womb contracts after the extending Force is abated, and likewise knows the Force required to turn the Child in the Womb, that closely embraces it, together with the Danger which may accrue to both Mother and Child, from fuch an Operation, will, I am thoroughly convinced, condemn fuch a Practice as you recommend. And you tell us in another Place (p. 330) that the Operator, as foon as the Membranes break, 'must run up his Hand, as quick as possible, into the Uterus, because then the lower Part of his Arm will fill up the Os Externum, like a Plug, fo that no more Water can pass.—Let the Hand be pushed up no further than the Middle of the Child's Body, because, if it is advanced as high as the Fundus, it must be withdrawn lower, before the Child can be turned; by which Means the Waters will be discharged, and the Uterus of confequênce contract, fo as to render the the Turning more difficult.' If the Uterus can contract fo foon, almost instantaneously, as to require this great Caution, how much worse must be the Consequence of leaving the Child ten or fifteen Minutes, or longer, in the Womb, as you have directed in p. 335?

(u) Obs. 243. and in Lib. 4. cap. 7. p. 422.

When Nature is prepared, and the Waters are difcharging, the best Method is certainly to bring away the Child immediately by the Feet, and not to let the Woman remain undelivered after the Membranes are burft, when perhaps her Pains will never again be ftrong enough to force out the Child, especially after the Waters are evacuated, on Account of the Hemorrhage; her Strength will also, at the same Time be lessened; and, after all, perhaps the Child must be brought away by the Feet. La Motte confirms this, (w) for he found but a little Difficulty in pushing back the Shoulders, because there were some Fluids left in the Uterus, in which Case, the turning of Children is not attended with any Difficulty, whereas it is very laborious when the Uterus is quite dry; he likewise tells us, that after the Discharge of the Waters, he has found the Mouth of the Womb exactly closed.' To this may be added, Thirdly and lastly, That the Hemorrhage will yet continue till the Contents of the Womb are all extracted. The Confequence of which will be either immediate Death, or the Forerunner of some other Diseases, as Dropsies, Leucophlegmatia, &c. And you tell us in p. 403, that one Cause of Flooding after Delivery, 'is owing to Floodings before it, and also to Part of the Placenta, or coagulated Blood left in the Womb.' And I have fhewn in my Effay on Midwifry, (x) 'that many People have expired by these Floodings, and others have discharged almost incredible Quantities of Blood in a very little Time. 'altho' only a small Part of the Placenta has remained in the Womb, to extend the Orifices, that open out of the Sinufes into the Cavity of the Uterus.' What Dangers then may not accrue from permitting the Child to remain in the Womb after the Waters are discharged, and the Placenta is in Part or wholly separated from the Uterus, in which Cafe, these Orifices, as well as the Sinufes are confequently more dilated? And you acknowledge (y) 'That as the Uterus contracts, it lef-

<sup>(</sup>w) In the Reflexion upon Obs. 249. (x) §. 157. p. 324. (y) p. 216. 217.

Discharges may happen while the Womb is only differenced to a small Degree, how much more must the Danger be increased while the Child remains therein? I must here likewise observe, that, althouthe Patient may chance to escape Death, yet her Constitution may be so impaired, that she may never recover her Health again. I can bring a great Number of Authorities from the best Writers against your Practice, but I think what I have here said is sufficient for my present Purpose, without increasing the Bulk of this Work more than necessary, and therefore I shall now proceed, first premising, that I shall hereafter have Occasion to take Notice of this again in §. 32.

The Review Writer above mentioned lays, No. 3.

you justly blame La Motte for having essayed to mission lead young Men in their Opinions, by concealing the unsuccessful Part of his Practice, which must have been considerable, if he, on all Accounts, neglected the Use of the Instruments, against which he indistruments, against which he indistruments but you only say (2) you are assaid, that he (La Motte) like other Writers, has concealed those Cases that would have been more useful to the young Practitioner. But I believe that neither of you have any Foundation for such a severe

Acculation.
You have endeavoured to leffen Deventer's Credit, and now the Review Writer makes a Sacrifice of La Motte's Reputation, in order, I suppose, to prejudice his Reader in your Favour. For my own Part, I do not remember any Author who offers to accuse him (excepting the Review Writer and yourself) and I leave the Reader to judge, from a sew Extracts out of La Motte's Book, whether such an Inference can be candidly brought from what he says, and from thence I shall shew,

First, that so far from essaying to mislead young Men, by concealing the unsuccessful Part of his Practice, that he acquaints his Reader therewith in several Cases.

Secondly, That so far from indiscriminately exclaiming against the Use of Instruments, he shews the Necessity of using them. And,

Laftly, I shall shew he frequently used various kinds

of Instruments.

First, then, La Motte says, (a) 'all Authors advise to seek for the Feet, when the Child presents
with the Face upwards; but there is nothing harder
than to discover it, as I speak knowingly, having, several Times been deceived in it, for near 30 Years that

'I have practifed.'

Again he tells us, (b) 'in using the Crotchet, I found 'that the Child had the Face upwards, which surprise fed me, not suspecting any Thing else besides the Head being locked in the Passage.' And a little below, he says, 'out of four Cases, where Children came away of themselves, I have, at least, been deceived in two, as to their Situation.'

In another Place, he adds, (c) 'I could not blame the hafty Officiousness of the Husband, whom he had got to affish him (in pulling off the Child's Head) his Intention was good, and my want of Precaution, was

the fole Occasion of this Accident.'

And in another Case, (d) 'I followed this Method before Experience and Reflexion had taught me another. Again he tells us, (e) That notwithstanding I put in Practice the most violent Endeavours, I found it impossible to make any Alteration in the Situation of the Feet; but at last, the Feet slipped down, and the Body followed immediately, without my knowing how. The Arms were broke, which I did not perceive before the Delivery; they were not broke in disengaging them, but in the Violence I used to finish the Labour. And in his very last Resection (f) speaking of Mariceau's Fillet, he says, I have try'd to use it several Times, but without Success, owing, perhaps, to my Want of Dexterity.

<sup>(</sup>a) Reflex. on Obs. 114 in 1689. (b) Obs. 250 and Reflex. thereon in 1684. (c) Reflex. on Obs. 260. in 1691. (d) Reflex. on Obs. 271. in 1697. 1686. (e) Obs. 277. (f) in 1719.

Secondly,

Secondly, I propose to shew that La Motte does not indiscriminately exclaim against the Use of Instruments, for he says, (g) we are obliged to have Recourse to Instruments, but even then the Hands come in afterwards, which I always prefer to Instruments, when

ever they can be used.'

In another Place he tells us, (b) 'The Operator is forced to have Recourse to several Instruments;' and I do not find, in any Part of La Motte's Book, the least Foundation for this heavy Charge, unless the Review Writer would misapply the following Passage, where La Motte says, (i) 'There are still many Surgeons, whose only Refuge in difficult Labours consist in an Instrument unskilfully managed, that always killed the Child, and often exposed the Woman to imminent Danger.' But here I must observe, he only exclaims against the unskilful Management of Instruments. A little after this, he says, (k) those who use the Hand unskilfully, are no less to blame than those who use the Crotchet, and then he mentions several Instances of the Mischiess owing to such Mismanagement.

He fays, (1) 'When once the Child is engaged in the Passage, it is past our Skill to push it back: Could an Operator foresee this, he would save the Woman a great deal of Pain; but this is impossible; but when it does happen, all we can do, is to wait patiently for the Pains to do the Work, or have Recourse to the Crotchet, or such like Instruments; tho, considering the great Improvements made in this Art for the last Century, we need not despair of some new Means being one Time or other found out,

to help these Sort of Labours.'

Lastly, I shall shew, he used different kinds of Instruments; for he says, (m) 'The Head's presenting 'may, by not coming directly right, cause the most

<sup>(</sup>g) Reflect. on Obs. 254. (b) Lib 3. cap. 1. p. 312. cap. 16. (i) Prefac. p. 3. (k) Pref. p. 7. (l) Reflex. on Obs. 313. in 1711. (m) Lib. 3. cap. 1. and cap. 16. p. 312.

dangerous of all Deliveries, for in other Situations, the Hands alone will do, the Child only suffers a little more, without the Mother's running any Hazard at all, but in this the Operator is forced to have Rescourse to several Instruments, each according to his

' particular Method.'

Sometimes La Motte (n) used the Crotchet, but finding the Dangers thence arising, he substituted other Methods, and never used (e) the Crotchettwice in Thicky Years; for having found (p) the great Benefit that accrues from evacuating the Brain, he favs. I refolved, from thence, never to use the Crotchet, but when all other Methods proved ineffeetual, The opening into the Skull ought to be made with different Instruments, according as the Head is more or less advanced; if it presents at the Covering, the Knife may be used; there being no Danger, fo long as the Sight directs the Instrument; if it be some little Way in the Vagina, the common Sciffars may be thrust into the Head, opening them. wide to enlarge the Orifice, and in fine, if it be at the Extremity of the Vagina, I use a Piece of Card, or Leather, which I conduct with my Hand, and apply on the Head, fliding along it a Knife which cuts but on one Side, and which I thrust into the Cranium to make a proper Orifice.'

In several Places (q) when the Head was advanced, he used 'the Knife, introduced his Fingers into the O'pening, evacuated the Brain, and sometimes brought out Parts of the Cranium; and then, using his Fingers Hook-Fashion, finished the Operation, without giving the Woman any, or but little Pain. When the Passage,' he says, 'is so exactly filled, as there is no introducing the Finger far enough to get Information, we are obliged to have Recourse to Instruments.'

In Cases where the Head presented at the Bottom of

<sup>(</sup>n) Obs. 245. in 1683. Obs. 248. in 1686. Obs. 250 in 1684. (e) Pref. p. 6. (p) Obs. 250. in 1684. (q) Obs. 232. in 1699. Obs. 247. in 1689. Obs. 252. Obs. 254. in 1686. Obs. 255. in 1699.

the Vagina, he fays, (r) 'I open'd the Cranium with my Sciffars, took away several Bones: I then used a Crotchet, which always gave way, but with a Pair of Blackfmith's Tongs I took hold of the Occipital

Bone and performed the Delivery.'

He afterwards tells us, (s) 'that he open'd Heads with the Sciffars, &c. and then with a Pair of Forceps (used for extracting the Stone) by fixing one Branch in the Infide of the Skull, and the other on the Outlide; or with two Pair of fuch Forceps fixed in the fame Manner, he extracted the Child.

In another Place he tells us, (1) When the Head of the Child was severed from the Body, and left in the Womb, I paffed my Left Hand into the Uterus, keeping the Head steady with it, and with the Right, flid a Canula, in which was a Knife; and with it made an Opening large enough to admit of my Fine gers, I enlarged it afterwards, and emptied Part of the Brain; after which I found a Hole ftrong enough to bring out the Head by, its Size being confiderably ! leffened.' He likewise used (u) ! the Scissars to cut the Naval String, when twifted about the Child's Neck.' Hence we fee, first, that La Motte, was fo far from concealing his bad Success to millead young Men (which the Review Writer says you justly blame him for) that he has very fairly confessed his bad Success, Ignorance and Want of Dexterity.

Secondly, That so far from indiscriminately exclaiming against the Use of Instruments, he fays, that there is an absolute Necessity for using them in several Cases, and only condemns the unskilful Use of them: in which he is certainly right, as is acknowledged by every ju-

dicious Operator.

And, thirdly, you fee, he has mentioned feveral Cales wherein he used Instruments, and what Sort they were, viz. The Crotchet, The bare Knife, Knife guarded by a Card, Leather, or a Canula; The

<sup>(</sup>n) Obl. 316. in 1712. Obl. 403. in 1715. (1) Obl. 40. in 1718. Obl. 407. in 1719. Obl. 408. in 1717. (1) Obl. 260. in 1691. (u) Obl. 121. in 1697. Sciffars,

Scissars, The Pair of Blacksmith's Tongs, and the Forceps for extracting the Stone out of the Bladder; to which may be added Mauriceau's Fillet, altho' he used it without Success, 'owing, says he, perhaps to

my want of Dexterity?

Not content with lessening the Reputation of Mauriceau, Deventer and La Motte, you bring a heavy Charge against other Writers, for concealing those Cases that would have been more useful to the young Practitioner. As you have not specified any particular Author, this cruel Accusation must be looked upon the whole Body of Writers, which must be looked upon, by every impartial Reader (because you bring no Authority to support your Assertion) as no greater Proof of your own Candour, Humanity, and Moderation, or of your Want of vain Exaggerations, as the Review Writer says, than of that Person's Judgment, Integrity and Impartiality.

As you say nothing more in the Remainder of your Introduction, but what falls more properly under my Cognizance in the Sequel, I shall conclude these Remarks upon your Introduction, by shewing there are Authors in this Century, and some of them Cotemporaries with yourself, whose Improvements you have omitted, as well as some of those of sormer Ages, notwithstanding your Promise in the Preface (w) to exhibit them all down to the Time of publishing your own

Book.

'Joh. Adriani Slevogt disputatio, de muliere gravida, prolapsu Uteri laborante, ubi recenset historiam resecti fæliciter uteri.—de Partu dissicili et Perinceo inde rupto, et de Femina Mola laborante, 1700.—de Dolorum Partus Spuriorum cum veris collatione in 1702.—De singularibus quibusdem Partis impedimentis, de agrà Secundinarum Resentions laborante, et in 1704 Partus naturalis collatus cum Preternaturali in 1705.

In the Commentar. of the new Academy at Paris; Littre de Utero diviso in 1705, the same Writer

takes notice of the Uterus Musculosus in puerpera, in

Andr. Jul. Boetger. de Respiratione Fœtusin Utero

Difs. in 1702. Danne Bush Elisan Journal Doda to

'Andrææ Ottomari Goelicke Dis. de novo Artificio curandi procidentiam Uteri Veram, 1710. qua ela-

fica ferrea fila in speciem Pessi torta commendat.

Christian Vater, de Partu Hominis post mortem ma-

J. G. Bergen de Vagitu Uterino, 1714.001

J. Antonii Terenzoni de Morbis Uteri, in 1715.
Observationes Varias non vulgares habet, et Scabiosas
Asperitates, Tubercula, squamas, cristasque Utero.

'Chr. Frid. Piftor. de Fœtu e rupto Utero in ab'domen prorumpente, 1716. A. Vater. de Utero
'gravid. in 1725.' wherein he gives the Description of
the Sinuses in the Substance of the Womb.

Frid. Hoffman de ignorata Uteri Structura multo-

rum Fonte, 1726. makes massattper and that the

In the Academy of Sciences at Paris, in 1724, may be seen Dusse's Method of stopping Floodings after Labour, by a gentle Compressure. In 1732 may be seen the Account of a Prolapsus Uteri a Sarcomate detracti.

In Commercio Norisco, among other Things, are

the Descriptions of the Musculi Uterini.

J. Henr. Cohausen, Lucina Ruyschiana, 1731.' He says, the Placenta ought not to be left in the Womb; and that the Muscular Fibres in the Substance of the Womb, help to reduce it after Labour, to its former Size.

Abraham. Vater. Dif. de Partu Difficili ex Infantis

Brachio prodeunte, 1732.

Cornelius Gladbach published at Leydon, 1732, for opening the Child's Head. He applauds the Scalpellum in fulco occultum.

Petri Stuart de Secundinis salutiseris atque noxiis Disp. 1736. In the same Year J. Frid. Behling published his Meditationes super Uterum in partu Ruptum.

Albert

Albert, ab Haller Fæmin. gravid. Histor, 1729. He gives the Description of two Women big with Child, whom he open'd: He likewife takes Notice of the Cicatrix in the Ovarium, &c.

bet J. And, Deisch de necessaria in Partu Instrumen-

torum Applicatione, 174010 1 over morganium Pl

Fr. de Buchwald, Thef. decad. de Mufculo Ruyf-Schii in Uteri Fundo, 1741. He defends Ruysch.

P. A. Boehmerus de Situ Uteri grandi in 1741, School Vinn Betralle

cum Icone

I. Car. Voigt. de capite Infantis abrupto, et variis 'illud ex Utero extrahendum Modis 1743.' in which he describes the various Instruments used.

Onymos de naturali Fœtus in Utero Materno situ, 5 1743. defendit Fætum nunguam aliter nisi capite cer-

! nuo, in Utero federe. sa net past cat of sa dong won

Fr. J. Menzler de Venæfectionis in Puerperis Abu-

fu et Ufu, 1744.

· Cl. Boltenius Fœtum respirare in Utero defendit wid. Comm. Lit. 1744, p. 355.

Muller de Utero Rupto. Dif. 1745. Fibras Vor-

ticolas Fundi Uteri describit. O this and a selection in a

J. Cassimiri Aulber de Fœtus prægresso capite partum retardante 1745. He mentions several Things worthy of Notice, et descripsit Instrumenta et Encheirefes pro capite impacto.

Wm. Dougla's Letter to you in 1748, against the

Use of your Wooden Forceps.

Benjamin Pugh in the same Year published his Treatile of Midwifry, in which he describ'd his new Forceps.

1. Christian. Kisner de morbis Puerperarum, 1748. Phil. Jac. Walther de partu naturali ejusque causa, I same Property

£ 1748. Ericus F. Elf. de Hæmorrhagiis Uteri sub statu

graviditatis, 1749. un ed out tour avoits mina.M

Exton's Midwifry, 1751, and in the fame Year I published 'my Essay towards a complete Treatise of the Theory and Practice of Midwifry.

If the Authors above mentioned, or any of 'em, have published the least new Invention, or made any

new

new Improvements, you have not done that Justice, which in your Preface you promised. If what they say be all Pretence and Amusement only, it was incumbent upon you to prove it so. Then, indeed, you would have shewn, not only an Air of Candour and Humanity, but have been a real Friend to Society. With Regard to myself, I hope every honest Reader will be convinced that I've herein thus far performed my Promise.

I shall now only add, that I have, as carefully as possible, avoided to give any wrong Quotations, and have endeavoured to come at the true Meaning of the Authors, that neither the Public, you, nor I might be

deceived.

Having thus far examined your Introduction, I shall

now proceed to the Treatife itself.

The first Thing of a Book that offers itself, is the Title, which, you say, is 'a Treatise on the Theory and Practice of Midwifry,' which (we are told at the End of this Volume) 'together with your Prints, and the Volume of Cases, hereaster to be printed, will compose a complete System of the Art.' How far you have accomplished your Design, I leave the Reader to judge, after having perused the Sequel; and if he finds my Remarks justly made, then the first Part or Foundation of your System will be very desective; and want many Repairs before you build the Remainder of your Superstructure.

It may feem odd to some People, that I should mention the Title Page, after having gone thro' the Introduction; but my Remarks upon the History of this useful Art seem naturally to demand the first Place; and, in my suture Proceeding I shall be obliged to refer from one Part of the Book to another, as the Subject Matter obliges me; and by comparing 'em shall shew

your feveral Contradictions therein, &c.

I shall begin with repeating Part of the requifite Qualifications of an Accoucheur, which you have given us at the latter End of your Book.

rotation in the least of the control

You there (a) fay, that Those who intend to practife Midwifry, ought, first of all to make them-'jelves Majters of Anatomy, and acquire a competent Knowledge in Surgery and Physic; because of their Connections with the Obltetric Art, if not always, at least, in many Cases. That a Man Midwife ought to be thus qualified, I entirely agree with you: But, should it appear from these Remarks (as I believe it will) that your Performance does not shew you to be thus qualified; then you have laid yourfelf open to the Cenfure of every Person, who has any just Pretence to the Knowledge abovementioned; notwithstanding that the Review Writer tells us, No. 1. ' your Book contains a diffinct and regular System of the Doftetric Art, in all its Branches, comprehending the ' Anatomy of the Parts.' Should it, I say, appear, that you have fcarce described one Part right, then either the Ignorance or Partiality, or both, of the abovementioned Writer, will be very evident.

You lay it down as a Rule, that those who intend to practise Midwifry, "ought first of all to make themselves "Masters of Anatomy;" by which, I suppose, you mean, at least, that Part of Anatomy in Females, principally concerned in the Propagation of our Species: this, I likewise conclude, was your Inducement for attempting to give an Anomatical Description of those Parts, as a proper Foundation for your Pupils to build upon: But, I fear, if they have no better Accounts from others than they can meet with in your Book, they will not only be very deficient in that requisite Knowledge, but will be frequently missed.

You say, (y) the lower Edge of the Pubis is equal to the lower Edge of the Frænum or Fourchette, which bounds the inferior Part of the Fossa Magna and Os Externum.

Your Description here is far from being just, whether the Woman be lying on her Back or standing erect; by what you say in one Place, the Reader would ima-

gine you speak of a Woman laid on her Back, for you fay in this same Paragraph, that the Meatus Urinarius is immediately below the under Edge of the Symohysis of the Ossa Pubis, and at the upper Part of the Os Externum, which is the Orifice of the Vagina. fituated immediately below the faid Bones of the Pubis; fo that if the Woman be lying down, the lower Edge of the Frænum cannot be equal to, that is, be upon a Level with, the lower Edge of the Pubis: And if the be erect, how can the upper Part of the Os Externum, which is lituated immediately below the Pubis, be equal with the lower Edge of the Fourchette; which bounds the inferior Part of the Os Externum? or, in other Words, How can the upper Part of the Os Externum he equal with the inferior Part? This shews how well the Review Writer has attended to the Subject; when he fays, No. 3. that vour Instructions are clear and perspicuous and vour Remarks judicious and happily deduced.

An attentive Reader may prove you are mistaken from your own Words, for you say, (2) 'that from 'the Upper Part of the Sacrum to the Coccygis is sive 'Inches, and from the upper Part of the Pubis to the 'lower, only two Inches;' and as the upper Part of the Os Externum is immediately below the Pubis, while the lower Part is formed by the Fourchette and Perinæum, which is sixed to the Coccyx, it is evident, that allowing the Top of the Pubis to be two Inches below the Level of the upper Part of the Sacrum; yet the upper Part of the Os Externum cannot be equal, that is, upon a Level with the Inserior Part.

You tell us; (a) that 'on each Side of the Meatus 'Urinarius in Women, are two small Lacunæ or

Openings, The Tubes of which ending in a Kind of Sacculus, come from the Prostrate Gland; from

these a thin Fluid is ejected in Time of Copulation, and sometimes to the Quantity of several Drams.

As you are the first Person, 1 remember to have met

EFFER

with, who pretends to know of Succuli capable of containing feveral Drams of any Fluid, I can't help regreting your omitting to give a more accurate Description of 'em; because the most eminent Anatomists take no Notice of any Sacculi of such Dimensions: Those mentioned by Moregagni and others being capable of containing only a very small Quantity of any fort of Fluid:

In the same Page you say, 'the Vagina is formed of a strong thick Membrane, of a spongy Texture.' Had you been more conversant in Diffections; or even better acquainted with Anatomical Writers of Character on the Subject, you would have found, that De Graaf (b) and Winslow (c) says 'it consists of two 'Coats, the Internal Membranous and much wrinkled, 'especially in Virgins. The External is muscular, being composed of longitudinal slessy Fibres, interwoven with numerous Blood Vessels; &c.'

You fay, (d) 'The Mouth of the Womb is often distinguished by the Appellation of Os Tinca: but as the Mention of these Parts will frequently occur in the Course of this Treatise, I shall, in order to avoid Consuson and Mistake, call the Entry into the Vagina, the Os Externum, and the other the Os In-

ternum, thro' the whole Book.

In the first Place, can the Os Internum be less confused, or convey a better Idea to the Reader, of the Mouth of the Womb, than the accustomed Expression of the Os Uteri? and in the next Place, you are so far from calling it the Os Internum thro' the whole Book, as you say you will, that I can point out near thirty Places, where you use the very Expression of Os Tincæ, or of Os Uteri (e).

You tell us, (f) that 'The Uterus is formed, first of the inside Membrane, that rises from the Vagina, and Lines all the interior Parts of the Womb: Immediately above this Coat is the thick Substance of the

(b) De Mulier. Organ. P. 226. (c) Expost. Anatom. Traitè de Bas Ventre No. 645, 646, 648. (d) P. 95. (e) Pages 118, 119, 120, &c. (f) P. 97.

'Uterus

Uterus, composed of a Plexus of Arteries, Lymphatics, Veins, and Nerves, and the Vessels on its Surface, when injected, seems to run in contorted Lines.
It appears to be of the same glandular Texture (the
not so compass) as that of the Mammae in the Breasts,
without any Muscular Fibres, except such as compose
the Coars of the Vessels; neither is there any Necessity
for that Muscle which Ruy sch pretended to discover at
the Fundus, for the Convenience of the forcing of the
Placenta; because this Cake as frequently adheres to

In this Paragraph there are so many Assertions contrary to Matters of Fact, that I can't avoid being surprized how you could publish such gross Errors, many of which, several of your Pupils (to my Knowledge) could have corrected, while they attended your Lectures: And you likewise so far forget yourself, that what you shally deny in one Part, you either doubt of, or acknowledge in another, which is the more amazing, as you tell us, you was say Tears in cosking up this Treatise.

You fay, 'The Uterus is formed, first of the Infide Membrane, that rifes from the Vagina, and lines all the interior Part of the Womb. This Part contradicts what the best and most accurate Anatomists have faid, who mention no fuch Membrane to line all the interior Part of the Womb: And I have told (g) you, 'That in the Womb of a Person who died unde-· livered, at her full Time, neither I (nor those along with me) could find fuch a Thing as any Membrane in that Part to which the Placenta adhered; and upon wiping the Infide of the Uterus, very gently, with a Sponge, there feem'd to be Pieces of a thin transparent Membrane to adhere to it, in such Parts of the Uterus, where the Placenta did not flick to it; but as the Womb was fomewhat corrupted, and the Membranes so very tender, we could not raise any Bulk of it, by either a Probe or Forceps, so as to be

certain what it was. I must further add, that this could probably be no more than the Mucus, which is squeezed betwixt the Chorion and Uterus, and may be frequently seen on that Part, somewhat resembling what I have mentioned. Such a Membrane, as you describe, would not only be useless, but would be very prejudicial, even so as to prevent the Fœtus from receiving the Benefit which, it has, by the present wise Contrivance; as I shall make appear presently. Heister, indeed, (b) says, The Cavity is lined with a porous and nervous Membrane; and in Women with Child, the Inner Membrane; and in Women with Child, the Inner Membrane almost entirely disappears; but Morgagni (i) says, it is rather a Sort of Net-work than a Membrane; and Albimus, and other Anatomists, deny there is any Membrane at all.

But even supposing a porous Membrane, as Heister says, it yet entirely disappears in Women with Child. The scratching, therefore, or tearing this, can never occasion a Flooding, as you tell us in page 403, because it is of such a Nature as not to hinder a Flux of Blood, al-

tho' no Way scratched or torn.

2dly, You fay, 'The thick Substance of the Uterus is composed of a Plexus of Arteries, Lymphatics,

Veins, and Nerves, and long and morning advisor

As I shall presently shew the true Fabric of the Womb, I shall now content myself with observing, that any Part of an Animal, thus composed, can never exert any material compressing Power, which the Uterus does in a greater Degree than any other Part of the Body: and all Physiologists have hitherto estimated the contractile Force of any Part from the Number and Strength of its muscular Fibres (as you may see in Borelli, Bellini, Baglivi, Bernouilli, and others) and not from the Number of its Blood-Vessels, which rather argues a Weakness in the Part; for was it otherwise, how surprizingly great must the contractile Force of the Lungs be, whose Blood Vessels are near equal to the rest of the Body? The Lymphatics are not to be

<sup>(</sup>b) Compend. of Anatomy, p. 135. (i) Advers. 4. p. 47.

distinguished, but in a Pregnant Womb, (k) as Mor-

gdly, You say, 'The Uterus appears to be of the same Glandular Texture (altho' not so compatt) as that of the Mamma in the Breasts.

From this an Anatomical Reader will be apt to say, you are as little versed in the Fabric of the Mamma in the Breasts, as you seem to be with that of the Womb. In several Parts of your Book, you allow the Womb has a very strong contractile Force, by which its Bulk will be reduced, in a short Time, from a very large to a small Size; yet no such Power was ever allowed to be in the Mamma in the Breasts, or in any Gland or Number of Glands.

Winflow (t) tells us, 'The Substance of the Womb is fongy and compact, with a copious Intertexture of

Vessels; and that the Body (m) of the Mamma is partly Glandular, and partly made up of Fat.

Whence you see, first, that the Mammæ and Uterus are not composed of the same Glandular Texture; and secondly, that the Substance of the Womb is more compast than that of the Mammæ; the very Contrary of which you have afferted,

4thly, you then fay, 'The Womb is without any Muscular Fibres, except such as compose the Coats of the Vessels; neither is there any Necessity for that

Muscle which Russeb pretended to discover at the

Fundus, for the forcing off the Placenta.

I can't help remarking here, that thro' your whole Book, where you have Occasion to mention any Thing which had been universally approved of, that you then either deny there can be such a Thing, or you represent it as a trivial Affair, and that too, either without assigning any Reason at all, or else you bring such as have little or no Force to support what you would have it do, the Reader may be convinced of this by only looking back into these Remarks, as well as by what I am going to say. And, I must

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<sup>(</sup>k) Advers. 4. P. 76. Heister's Anat. P. 136. (1) Sect 8. No. 600. Anatom. (m) Sect. 9. No. 10.

observe, that whenever a Man takes upon him to contradict received Opinions, it is expected he should bring valid Proof of what he advances, and must at the same

Time remember, that to affirm is not to reason.

Ahho' you have positively afferted that the Womb is without any Muscular Fibres, except such as compose the Coats of the Vessels; yet, in your very next Page, you feem to doubt of what you have afferted, by faying, the Substance of the Uterus appears more compact and pale than that of Muscles.' Whence it is very evident, that it must be composed of semething more than a Plexus of Arteries, &c. Moreover, you fay, If it be muscular, at least the Fibres are more closely and more intricately disposed, than in other mufcular Parts: and what are Tendons but the muscular Fibres more closely and more intricately difposed, than even those of the Womb? and if, as you fay, they are fo intricately disposed; is it not a stronger Argument that they are rather muscular Fibres than a Plexus of Veffels?

In another Place, (n) when you give an Account of the Contraction of the Uterus; you say, 'The Vessels themselves, that were stretched, elongated, and seemed to recede from one another, are also contracted by Degrees, and that in such a Direction as to reduce the Uterus into the same Shape and Size, which it bore before Impregnation: Nay, the Fibres are again so compacted, that they, and even the Vessels are scarce discernable.' So that here you allow Fibres, besides those which compose the Coats of the Vessels, which are discernable, tho' with Difficulty, and in another Place, you allow 'there are Nervous Fibres in

the Os Uteri.'

Altho' you take upon you to say Ruysch only pretended to find out the Muscular Fibres in the Fundus Uteri; yet you see C. Bartholin also describes the Muscular Fibres, as I before shew'd; and Littre, in the Commentary of the new Academy at Paris, in 1706,

30 3 (n) P. 100

[ 67 J

takes Notice of the Uterus Musculosus in puerpera. In Commercio Norisco you may find the Descriptions of the Musculi Uterini.

J. Henr. Cobausen, Lucina Ruyschiana in 1731 mentions the Muscular Fibres in the Substance of the Womb, which help to reduce it after Labour to its former Size.

Fr. de Buchwald, Tes. Decad, de Musculo Ruyschii in Uteri Fundo, in 1741, who defends Ruysch's Dis-

covery. And

Muller in 1745 describes the Fibrus Vorticosas Uteri, in his Dis. de Utero Rupto. To all which may be added, my Account of the Fibres or Starlike Muscles, which I saw in the Womb of the Person who died undelivered; which I likewise shewed to those who were with me.

From hence you see, that Ruysch made a real, and not a pretended Discovery; and surely the Credit of all these Authors will be looked upon in full as strong a Light as one single Assertion of yours, especially as you offer no other Argument against the finding out of this Muscle, than that 'there is no Necessity for it, 'at the Fundus, to force off the Placenta; because the Cake as frequently adheres to the other Parts of the Womb as to the Fundus.' Which I shall take Notice of in its proper Place.

You then tell your Reader, (p) 'that the Blood 'Vessels of the Womb, in the Virgin, or unimpregnated State, are very small, except just at the Roots of the Ligamenta lata; but as soon, almost, as they

enter the Substance, they are dispersed into such. Numbers of smaller Branches thro the whole, that when it is cut, we can observe but sew, and those very small Orifices, much less any Cavities that de-

ferve the Name of Sinuses."

Any Person who will carefully observe an Uterus just open'd, especially if the Woman died of any acute Disease, or had the Menses at that Time, will easily

of the Vessels: For let him gently wipe off such Blood as appears upon making the Incision, and he may see the Cavities whence the Blood was deterged, which were in so many small Lumps: Let the Person then gently squeeze the Womb, and he may see the Blood come out of the very minute Vessels of different Diameters into these Cavities or Sinuses; whereas, if a Blood-vessel be cut cross ways, he will see the Blood issue out immediately; which wipe off, and then upon the least Compressure the Blood will appear again in as large a Drop, or Bulk, as before, coming out of a Vessel of the same Diameter; which appears otherwise in the Uterus, as above—But this will be more fully explained presently.

You say (q), 'In Coition, the Uterus yields three or 'four Inches to the Pressure of the Penis, having a 'free Motion upwards and downwards; so that the 'reciprocal Oscillation, which is permitted by this 'Contrivance, increases the mutual Titillation and 'Pleasure.'

I will not here enter into any Debate with you upon the Matter of Fact or Propriety of your Expression, but shall only observe, that to move the Uterus sour Inches higher than its usual Situation, will require a Man of extensive Abilities; but it requires no great Capacity to know that it is the Friction on the Clitoris, that increases the Pleasure in the Female, to which this Oscillation of the Uterus can no way contribute, therefore their mutual Pleasure cannot be thereby promoted.

Account of the Womb; it is necessary to describe the true Fabric of the Uteres from the best Authorities, as collected in my Essay on Midwifery (r), that the Reader may the better understand what follows.

I told you, "That the Womb is composed of a spongy Substance, something resembling that of the

150 F 118 (6) P 28.

grant l'hadt ta establet

<sup>(</sup>q) P. 102. (r) Sect. 7. p. 17.

Spleen, or rather that of the Corpora cavernofa Penis, in which feveral Arteries open themselves into Cells or Sinufes, whose Orifices open into the Cavity of the Womb, and pour Liquors thereinto; which may be feen to ouze out at any Time by gently preffing the Substance of an opened Urerus. These Cells or Sinuses in Time of Pregnancy, when diftended,

increase the Thickness of the Womb. Hence the Danger of attempting to extend the Uterus after it is closely contracted about the Child; when the Veffels which thus conveyed the Blood to diftend the Sinufes, are, in a great measure, emptied, is very apparent; wherefore such Hazards ought to be

avoided, if possible.

I likewise said, 'The exterior Part of the Substance of the Womb was composed of reticular Bundles of muscular Fibres, mentioned by Malpigbius, and alfo by C. Bartholin the younger: The inner Side of the Fundus, or Bottom of the Wolnb, is composed of a turbinated Set of Fibres found out by Ruyleb, and is therefore called his Muscle, or Musculus orbicularis; which has fince been observed by several Persons of great Repute as I shewed you a little above: In the Womb of a Person I saw opened, who died undelivered, I not only observed these Fibres mentioned by Rayfeb, but also several muscular Fibres, which feemed to strike out from a Center, like so many Radii, which were placed betwixt the Orifices at the then Fundus Uteri, quite as far as where the Fallopian Tubes enter the Womb.

These Orifices or Canals are found to abound more particularly in the Fundus Uteri, and are only the Extremities of the Canals that come out from the larger Cavities, or Sinuses, which are lodged within the Substance of the Womb; and I observed feveral Orifices opening out of the Substance into the fame Sinus, fomerimes four, and sometimes five or fix. All these Things I shewed to several By-Standersing Contradicted without afficiensbrath tealon

These Sinuses are membranous Cavities, communicating with each other, and have numerous Arteteries spread on them, whose lateral Branches open ' into Cells, the Veins go out to be joined to the other, Veins, that return the Blood from the other Parts of the Womb. They are diffended with Blood in the \* Time of the Menses, when the Orifices are also enlarged. Mauriceau opened a Woman that was hanged, whilft the had her Menfes, and observed a little Blood came out of the Orifices, at the Fundus Uteri, which shews they did not come out of the Vessels, the Lumps being formed by the Sinuses. During Pregnancy the Sinuses and Canals that open into the Womb, are gradually diffended and enlarged; infomuch, that at the End of the ninth Month of Gravidation, they are so large as to admit the End of the biggest Finger, and the Canals or Orifices, which open into the Womb will admit the End of the little Finger. These Sinuses are to be 4 found through the whole Substances of the Womb, but are largest in the Fundus Uteri, whereto the Placenta generally adheres, and that too in all Politions of the Womb. Hence we fee both Arteries and · Veins communicate with these Sinuses, and the Sia nufes open into the Cavity of the Uterus, and chiefly of at the Fundus; from whence we find the Menses 4 and Lochia flow from these Canals.

From this Make-Substance, &c. of the Womb, we may see the Usefulness of one Part of the

Womb's extending more than another.

All these Accounts, for your's and your Reader's Satisfaction, you may find amongst the following most eminent Writers, and most accurate Anatomists. From De Graof, Malphighius, Ruysch, Littre in the Memoirs de l'Academ. des Sciences, C. Bartholin, Morgagni, Mauriceau, Deventer, Albinus, Schurigius, and A. Vaterus de Utero Gravid. in 1725, who gave a Description of these Sinuses. All these, and many others, you have contradicted, without assigning any

Reason, except the two following, which, I think, are very infufficient. I have deal consulting absolute

First, you say (s), 'If there were Sinuses, the same Mechanism must prevail in other Parts of the Body, through which the like periodical Discharge is made, when the Uterus is obstructed, as from the Nofe, &c. but this does not follow: for where ever the Humours. are drove to any Part of the Body, if they cannot pass through the natural Courses, they will force their Way by burfting the capillary Veffels: And was there noother Use for these Sinuses in the Substance of the Womb. than barely for the Discharge of the Menses, another Mechanism might perhaps have answered the End proposed? But their chief Use is during a pregnant State, and therefore they were not wanted in other Parts. whence Discharges only might flow.

Secondly, you fay, ' Belides fuch an Accumulation in large Sinufes, though the Blood were not entirely

flagnated, would produce a Viscosity, like that

which obtains in Rheumatisms, and other inflamma-

tory Diftempers. The service of the house of the Jud

Here, I think, you feem to confound Things together; for you are now speaking of the Catamenia; and use the Expression of large Sinuses; whereas the Authors, as above named, mentioned the Sinufes to be large only in a pregnant State, and at or near the Time of Delivery; and when the Womb is contracted into its usual Size, as before Impregnation, the Sinuses must be contracted in the same Proportion; hence they are fo small in that State, as not to appear large, altho diftinguishable; especially by gently squeezing the Womb when cut across, or laid open; so that here is not Space sufficient for an Accumulation of much Blood in large Sinuses, so as to produce any great Viscosity, to occasion Rheumatisms, altho fueh like Complaints frequently attend the Flowing of the Menses, viz. a Senfation of a Weight, Heat, and Pain.

From what has been faid you fee the Womb is increafed in Bulk by the Blood diffending the spongy

an the Uterus is fully extended at 1.001. To (5) calone-

Substance; and as all the different Parts must distend proportionably to their Strength, and the distending Power; and as the Fundus Uteri has the largest Sinuses, it is distended most; and so, in course, the Womb is less extended between the Os Uteri, and the Part where the Fallopian Tubes enter it, than between that Part and the Fundus, as it is at the Time

of Delivery and his whole the total to a tapita and the an

Hence we see the Method of enabling the Womb to be distended, is by filling these Sinuses; for without that no human Art can extend the Uterus much without the Hazard of bursting the Substance, whence the Practice of forcibly extending the Womb to any considerable Degree, after it is strongly contracted about the Child, by the too early Evacuation of the Waters out of the Bag, is very dangerous, as I have sufficiently proved in my Essay on Midwifery, and is oftner the Cause of the Woman's Death, than most People, I fear, are aware of. Hence also the Dangers attending the Practice of evacuating the Waters to restrain a Flooding, as you recommended above, are more apparent.

It may not be improperhere to clear up what is meant by the Fundus Uteri; not only that we may understand each other, but that the Reader may attain the fame Knowledge. The Fundus Uteri, in an unimpregnated State, is that Part which is opposite to the Os Tincæ, lying betwixt the two Entrances of the Fallopian Tubes into the Womb, and is then almost in a streight Line across the End within; but in a Woman just before her Delivery, the Fundus is so extended as to form the End of an Ellipsis or Oval, from the Entrance of one Fallopian Tube into the Womb, to that of the other. Whence a Placenta adhering to any Part betwixt these two Tubes may justly be faid to adhere to the Fundus. altho' it is not immediately opposite to the Os Tincæ: For supposing an impregnated Ovum to adhere to the Fundus Uteri nearer to one of the Fallopian Tubes, than to the other in the Beginning of Pregnancy: then when the Uterus is fully extended at the Time of a reSide more or less, as it is fixed nearer to, or more distant from, the Part in which the Fallopian Tube enters the Womb; but yet may very justly be said to slick to the Fundus Uteri, as being betwize the two Tubes; as I have fully explained in my Essay (a); and Nature seems to have pointed out this as the proper Situation of the Placenta: For the Sinuses are sound to be larger at the Fundus than at any other Part of the Womb. Whence you are mistaken in saying (a), I hat the Placenta as frequently adheres to other Parts of the Womb.

In another Place (w) you frem to support what I have faid, and to contradict yourself a for you fay, it is supposed that the Ovum fwims in a Fluid, which it absorbs so, as to increase gradually in Magnitude, till it comes in Contact with all the Inner Surface of - 4 the Fundus; and this being diftended in proportion to the Augmentation of its Contents, the upper Part of the Neck begins also to be stretched; and about the third Month, nearly a fourth Part of the Neck, at its upper Part, is diffended equal with the Pundes: and at the fifth Month, the Fundus is extended to a much greater Magnitude, and rifes upwards to the Middle Space betwixt the upper Part of the Pubis and Navel, and at that Period one Half of the Neck is extended.' All this shews the Adhesion of the Placenta to the Fundus Uteri to be generally as is above explained; and at the fame Time convinces us of the Improbablity, nay, I might fay, the Impofability, of the Placenta ever adhering to the Os Uteri; because it sticks to the Womb in a very there Time after the Oyum enters therein; and you acknowledge, that at the 5th Month only one Half of the Neck is extended; How then can the Placenta adhere to the Infide of the Os Uteri, as you tell us in another Place?

You say (9) That the Ligamenta Lata are formed and rise from Muscles that cover the Inside of the I-

<sup>(</sup>r) Sect. 25, p. 52. (u) P. 98, and 137. (w) P. 117. (x) P. 137. (y) P. 101, 103.

ticularly Winflow (2) and De Graaf, who tell us, that the Portion of the Peritonaum, which envelopes the Womb, forms naturally on its lateral Edges two large Prolongations, or Duplicatures, improperly called Ligamenta Lata, these are extended from each Coiner of the Fundus Uteri to the Sides of the Pelvis dividing it into two Cavities (Posterior and Anterio) and are afterwards continued in a loose Manner with the same Peritonaum to the Sides of the Pelvis, but are no Way fixed to, or inserted in the Os Ilia, as some have imagined; De Graaf says, Ligamentorum latorum Beneficio Uterus non Ossibus Iliis alligetur ut perperam creditum est.

You likewise tell vs (b, That the Ligamenta Rotunda feemingly arise from the crural Artery and Vein, from whence they are extended to the Sides of the Fundus Uteri ; but Albinus (c), Aftruc (d), Winflow (e), and De Granf (f) inform us, That they run through the Duplicature of the broad Ligaments from each Corner of the Womb, just under the Fallopian Tubes, as far as the Opening of the oblique Muscles, thro which they pass, and under the fleshy Substance of the transverse Muscles, and · Aide over the Os Pubis obliquely, and reaching the upper and middle Part of the Groin, near the Clitoris, they divaricate in Form of a Goofe's Foot, into several small Branches, whereof most of them are lost in the Fat; but some of them are inserted in the Membranes (as well as the Fat) which are continued over the upper and interior Parts of the Thighs. They are not Ligaments, but only a Bundle of Arteries and Veins interwoven and connected together by a fine cellular Membrane of the Peritonaum; as Winflow (g), Garengeot (b), and Mongagni (i),

order carrie that et confinerat amic

<sup>(2)</sup> Traité de Bas Ventre, Numb. 69, p. 622. (a) P. 269. (b) P. 104. (c) Hift. Musc. p. 288. (d) Of the Diseases of Women, p. 7. (e) Ibid. Numb. 59. (f) Ibid. p. 272, 273. (g) Ibid. Numb. 679. (b) Splanch, p. 326. (i) Advers. Anatom. 4; p. 49.

affure us; and this last Author tells us, he has feen them distended with Blood to the Thickness of his

\* middle Finger. On a man with the forman with With !

Hence you find, that your anatomical Descriptions are not only very deficient, but actually contrary to the Accounts of all our best and most accurate Anatomists. May not therefore the Judgment or Integrity of the Rewiew Writer, in Number 1, very juffly here be called in question, who has told us you bave given us the Anatomy of the Parts, &c. a Branch of Knowledge that ' every Accouche ur, you fay, ought first to be Master of?' And may not the Reader be apt hence to judge, that there will not be fo great an Accuracy in your anatomical Deligns for Copper-plates, as the Review Writer, Number IV. has affured us of? because, if you have had such Opportunities as he infinuates, you must have seen the Smuses mentioned to be in the Substance of the Womb, as well as muscular Fibres, Gr. taken notice of by all the best Anatomists; which you have omitted to describe, altho' they are capable of ocular Demonstration, and therefore ought to be very accurately delineated in your Drawings. And I must observe to you, that it is not the beautiful Drawings of an able Artist, but the exact Imitation of Nature, (altho' by a sworfe Hand) that is to be regarded. But where Art and Nature conspire, as in Albinus's Tables, &c. there we may expect something like Perfection. Some few indeed, and perhaps the wifest Spirits of the Nation, now attribute almost every Improvement in Art and Science to Industry, and a right Application; but I willingly submit to Horace's Judgment in this Respect.

\* Ego nec Studium fine divite Vena,

Nec ruda quid profit video Ingenium. Alterius fic.

Altera poscit opem res, et conspirat amicè.

ART. POET. Ver. 409, 410, 411.

Ariene, I more being in ear meaning accover hed made.

You intitle your Book The Theory and Practice of

Midwifery, but you have not explained what is meant

by Theory in the Medical Profession.

What we mean by Theory cannot be a mere useless Speculation, or Confideration of an Object; but that specularive Part of any Science which directs to the Rules of Practice. To be learned in an Art. &c. the Theory suffices, but to be Master of it, both Theory and Practice are requifite. And as Observation comprehends the sensible Qualities of Bodies, the Course of Diseases, their Symptoms, and the Effects of Medicines and Applications; fo reasoning from the Structure and Functions of the Parts, the Composition of mixed Bodies, the Qualities of the circulating Fluids, the Nature of Aliments, and the Action of Medicines, enables us to account for the Alterations we find. The Knowledge, thus founded, is what all judicious People call true Theory ; which is absolutely necessary to be understood by every Person who would become a Master of his Profession, as it will enable him the fooner, and more easily to learn the Diagnostics, and Method of coring Difeases, and to improve the Practice of Midwifery: Common at the confeb y learned by you god as

There are indeed some Things which may be said to be a mere Matter of Speculation, without any View to Practice or Application, concerning which any Hypothesis, however ingenious, may be deemed useless, and only made to amuse the Readers. Of this Kind is Lewenboek's System of the Animalcula in semine masculino, whose Hypothesis may be liable to Objections, and whose Systems may be overturned by the next that follows; but with this we have nothing to do, un-

less, as you fay, to amuse the Readers.

The Theory, then, as defined above, seems to be that which you have made as Part of the Foundation of your own Work, if we are to judge from what you say in several Parts of the Book; for you tell us (k), In the Course of my Deliberations on this Subject, I likewise tried to improve upon the Forceps, which

' feemed to me an Instrument more mechanically as dapted, and easier applied than any other Contrivance hitherto used.' Now this must be from Theory, that is, a Judgment formed from the Mechanism of the Forceps, the Make of the Pelvis, and the Shape and Size of the Child's Head.

Again you say (1), 'The Ingenuity of several Gen'tlemen of the Prosession was stimulated, in order to
'contrive some gentler Method of bringing along the
'Head (than with the Crotchet) so as to save the
'Child without any Prejudice to the Mother, and
'that their Endeavours have not been without Success.'
Did not this savourite Invention arise from the same
Kind of Reasoning?

Again you fay (m), 'I therefore (having before converted my principal Attention to the Study of Midwifery) began to confider the whole in a mechanical Wiew, and reduce the Extraction of the Child to the Rules of moving Bodies in different Directions: In consequence of this Plan, I more accurately surveyed \* the Dimensions and Form of the Pelvis, together with the Figure of the Child's Head, and the Mane ner in which it passed along in natural Labours, and from the Knowledge of these Things, I not only de-' livered with greater Ease and Safety than before, but e also had the Satisfaction to find in teaching, that I could convey a more distinct Idea of the Art in this mechanical Light, than in any other. Is not this from Theory, that is, have you not reduced Observation and Practice to Rules, which is the Theory, as above defined? Nay in the very next Page you fay, The Confideration of Mechanics applied to Midwifery, is likewise in no case more useful, than when

the Child must be turned by the Feet, because there we are principally to regard the Contraction of the Uterus, the Position of the Child, and the Method of moving a Body confined in such a Manner; but I

bave advanced nothing in Mechanics, but what I find

offerul in Practice, and in conveying a diffinct No-• tion of the feveral Difficulties that occur to those who

are or have been under my Instructions, for wobom the

· Treatife is principally designed?" Was it not Theory that taught you to find out this Method, so useful in

Practice, as you call it?

Again you say (n), As my chief Study hath been to improve the Art of Midwifery, I have considered a great many different Methods, with a View of fixing upon that which should best succeed in Practice: And was not your Knowledge in Philosophy, Anatomy, &c. your Guide and Foundation of these that you

call Improvements?

These Instances are sufficient to shew what you mean by Theory, if you mean any Thing, because you give the Descriptions of the Pelvis, Child, &c. a thorough Knowledge of which, you say, is to be the Foundation of the different Methods of Deliveries: That is, Experience reduced into Rules for Practice. This shews the Advantage of establishing a proper Theory or System; nay, I may add, the Necessity of doing it, that your Pupils, and others, may have a proper Foundation, not only for understanding the prefent Practice, and the Reason for so doing, but to induce or enable them to make future Discoveries.

From perufing the foregoing Paragraphs, and other Parts of the Book, the impartial Reader would imagine your Theory to be a material Part (as certainly it is) of the complete System of Midwifery, as well as from reading your Title-Page, and the last Part of your Advertisement at the End of your Book. How great then must his Surprise be to meet with no Defini-tion of this (as you term it) Theory in your whole Book, which is yet fo necessary towards making your Instructions to clear and perspicuous, and deducing your Remarks to bappily and judiciously as the Review Writer, Number III. tells us? And if Good-nature be not greatly prevalent, his Surprise must kindle in Indigna-

tion to find Theory only inserted to amuse your Readers, (Pupils) for whose Use your Treatise of the Theory and Practice of Midwifery is ebiefly designed (0). What must be think of the Author who fills a great Part of his Book with what can only be called Theory, when the fame Person tells him (p)? ' That Theory is but of little Service towards afcertaining the Diagnostics and Cure of Difeases, or improving the Practice of 'Midwifery, and therefore such Enquiries are the less ' material.' And yet in your first Page you tell us, You have industriously avoided all Theory, except so much as may ferve to whet the Genius of young Practitioners, and be as Hints to introduce more valuable Discoveries in the Art.' If Theory be of so little Service as you have just told us, how can it serve to whet the Genius of young Practitioners, and be a Means of introducing more valuable Discoveries? This very last Expression implies not only its Use, but the Necessity of it. How can any of your Pupils reconcile these real Contradictions? How must be know what to trust to, when many and various Parts of this Book clash one with the other? Does not your following Paragraph betray a quaint Kind of Chicane and Arrogance, to condemn at once every Theory but your own? For you fay, 'That the young Practitioner may not be milled by the useless Theories and uncertain Conjectures of both ancient and modern Writers, it may be necessary to observe in general, that all Hypotheses hitherto espoused are liable to many material Objections; and that almost every System hath been overthrown by that which followed it.' And for the same Reason may not the next Book that is published overthrow your's?

You fay (r), The Coccyx is moveable at its Connection with the Sacrum, as are also the four Bones that compose it; and that in some Cases the different

Pieces of this Bone are rigidly cemented together; but

<sup>(</sup>b) Pref. p. 3, p. 252. (c) P. 69. (g) P. 68. (r) P. 75. this

his Anchylofis feldom happens, because they undergo a gentle Motion at every Excretion of the Faces,

\* which helps to preferve their Mobility. 2013 1000

First you lay, The Coceyn is moveable at its Connection with the Sacrum. by which, I suppose, you mean moveable outwards, or else it will not answer your Purpose. This is fo far from Fact, that Nature has made that Bone of the Coceyx, with a Process going obliquely upwards and outwards, called by Albinus Processis Obliques Externus, which goes against the inferior Process of the last Bone of the Sacrum. This Process, he says, "cum superiore primi Officuli Coceygis committing;" whence it is evident, that Providence seems to have done this to prevent its yielding that Way. You have likewise again laid it down as a Rule, that there are always four Bones to compose the Os Coceygis, whereas Anatomists frequently find only three.

You have also made a very bold Affertion, which, nevertheless, I believe, is not true in fact; for, let any Person try to press back the Coccygis in an adult Woman, or rather in several Women, and he'll soon find out your Error; because it requires great Force to move it in most of em, in many it is impracticable; and, moreover, whatever Force the Excretion of the Fæces may have, it will be equally pressing on all Sides; and of course that Part, which can give the least Resistance will yield the most; therefore, that Part of the Rectum next the Vagina will first give Way, and sufficiently too, for the hardest Fæces to pass without the least Motion of the Coccyx. But as you have not proved your Affertion, it ought to go for nothing.

You likewise say, (s) The upper Part of a well shaped Pelvis represents a kind of impersect Oval, or something that approaches to a triangular Figure, but you have omitted to acquaint the Readers, that the Sacrum projects into this Cavity, even in a well shaped Pelvis; insomuch, that if a streight Line be

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drawn from one Side of the Pelvis to the other, and to touch the Projection of the Sacrum; a confiderable Vacancy or Cavity will be left betwixt the Line and Back, on each Side that Part of the Bone. This is very necessary for the Reader to remember, as he will find in the Sequel; and is of such Consequence, that I am not a little surprized at the Omission.

You fay, (t) That the Width of the lower Part of the Pelvis is the Reverse of the upper, when the Os

\* Coccygis is prefled backward by the Head of the

Child; because, in that Case, the Distance between the Coccyx and the Lower-part of the Pubes is five

Inches and a Quarter; whereas the inferior and po-

fterior Parts of one Os Ischium are no more than

four Inches and a Quarter from the same Parts of the

other. Indeed the Width of the lower Part of the

Pelvis is naturally the fame in both Diameters; fo that this Difference of an Inch is occasioned by the

Yielding of the Coccyx in the Birth.

But, in another Place, (u) you say, 'The Perinæum' extends from this Border (the Fourchette) to the Anus, being about one Inch, or one and a half, in Length, the wrinkled Part of the Anus is about three Quarters of an Inch in Diameter; from thence to the Coccyx, the Distance is about two Inches; so that the whole Extent from the Fourchette to this Bone, amounts to about four Inches, or sour and a Quarter; and I may add that the Distance from the Fourchette to the Pubes, is at least one Inch, if not more, so that according to this Part of the Book, the Child's Head might pass, tho' very large, without ever extending the Coccyx.

As a great many of my future Remarks depend on the properly adjusting these Matters, the Reader will excuse me, for taking up so much Time as will be necessary to consute you, in what, prima facie, he may

think a very trifling Affair.

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In the first Place, you here beg the Question, by supposing that the Coccyx will yield an Inch; but you

(e) P: 78. (u) P. 92.

have brought no Argument to prove any fuch Thing: In the next Place, I (w) had given a true Anatomical Description of the Muscles which have their Origins and Infertions in the different Parts of the Palais, some of which are about two Inches in Length; elpecially the Coceygæi which arise from the acute Proceffes of the Ischium and are inferted into the Os Coccygis, which they pull forwards; betwire the faid Processes and the Os Coccygis the Distance is only about two Inches; so that was the Coccyx to lengthen and yield one Inch, these Muscles must either be torn afunder or be firetched one Half of their whole Length; which I believe to be impossible, without destroying their Elasticity, or Power of contracting again, at least we know of no Muscle or Fibre in the whole Body that will bear fuch an Extension, nay nor any Thing like it: This Argument, therefore, you fhould have answered.

As you fay the Os Coccygis is preffed back one Inch by the Head of the Child; it would have been proper for you to have directed us how to come at that Knowledge; for the Distance ought to be measured very exactly, both before the Descent of the Child's Head into the Pelvis, and when it extends the Coccyx one luchs. The first is difficult to do, and the last much more fo, if at all possible to be done; because, at that Time, the Head will press the other Parts outwards very much: To measure those Parts of a dead Subject, is a very uncertain Method, especially if a Perfon has a mind to play Tricks, by extending the Coc-

cyx beforehand.

You lay again, (x) 'The Depth of the Pelvis, from the upper Part of the Sacrum, where it is arti-culated to the last Vertebra of the Loins, to the low-er End of the Coccyx, is about five Inches in a

freight Line; but when this Appendix is stretched

outward and backward, the Diftance will be one क में प्रकार पर में जी में पर

· Inch more

<sup>(</sup>w) In my Effay, P. 3. and Poffice, 1, 2, 3. (x) P. 79.

[ 83 ]

I must object, that in the last Paragraph, you made the Distance between the Coocys and Pubes to be one into more, when pushed backvby the Child's Head, before Laboury and in this you make this wife to be an Inch longery distant from the upper Part of the Saconani committee and more and another the upper Part of the Saconani committee and more and another the upper Part of the Saconani committee and more and another upper part of the Saconani committee and more and another upper part of the Saconani committee and more and another upper part of the Saconani committee and more and another upper part of the Saconani committee another upper part of the Saconani committee and another upper part of the Saconani committee another upper part of the Saconani committee and another upper part of the Saconani committee another upper part of the Saconani committee another upper part of the Saconani committee and another upper part of the Saconani committee and another upper part of the Saconani committee and another upper part of the Saconani committee another up

For then proceed and tellous, That the Depth from the Sides of the Bilding is four Inches, and the lower Parts of the Inches, and from the upper to the lower Parts of the Office Publis, where they join, the Dillance is no more than two Inches; fo that in the Dimensions of the Petvis, the Side is twice, and the Back Part three Times the Depth of the Fore Part.

Depth of the Fore Part to fall to the province The Saerum and Coceys being conver bathe Out-fide, exhibit a Concave Figure on the In-fide; The Curve being increased toward the lower End. fo as that from the Extremity of the Coccys to the Middle of the Sacrum, the Sweep nearly refembles Semichele : and from thence the Bone Robes 46wards and forwards. In this Place, voe fave the Sweep of the Coccyn to the Middle of the Sacrum is near a Semicircle; but here lies a Difficulty you'll not eafly get over, for as the Coceyw will only be about wthird Part of this Semicircle, that is, at most, about two Inches in Length, and as the first Bone (which is the largefty joins the Sacrum, is defended from moving backwards, the whole Extension must be made by the other Bones? whether there be two or three. Is it. therefore, probable, may, I may fax possible, for that Pare to become firetched out, or extended a full Inch from a Semicircle to almost a streight Line, without a Diffecation But this you must make appear, or elfe your Readming must be falle, and if the Coceyx does a ner firerch ourward and backward one Inch fas it neither can nor does in a natural Way, then the Backpart of the Pelvis cannot be three Times the Depth of the Fore Part, which overturns a great Part of your Hypothesis.

And In any Lifey 1985 O Bengaran all that

You proceed again (9) 5 From the Upper Part of the Brim on each Side (but nearer the Fore than the Back Part) to the lower Parts of the Ischia, the Defrent is perpendicular, and the Opening on each Side betwirt the lower Parts of the Sacrum and the posterior Parts of each Ischium, is about three Inches deep, and two and a Half in width. The upper Part of this Vacuity, on each Side, gives Passage and Lodgements to a Muscle, Vessels, Nerves, &c. at its lower Part the Coccygaeus Muscle and Ligament abovementioned are stretched across from Bone to Bone; and this Ligament is on the Outfide frengthened with another strong Expansion, rising from the Tuberolity of the Ifchium, and fixed into the Edge of the Sacrum and Coccyx. All thefe Parts yield and stretch, forming a Concave equal to that of the Sacrum, when the Fore or Hind-head of the Child is pushed down at the Side and Back-part of the Pelvis: but, according to you, it should do that without the Head pushing down so much, as will appear presently.

You fay, 3 That betwint the lower Parts of the Sacrum and posterior Parts of the Ischium, is about three Inches deep, and two and a Half in Width, that at the lower Part of the Vacuity the Coccygaeous Muscles and Ligament abovementioned are stretched across from Bone to Bone, and strengthened with another strong Expansion, rising from the Tuberosity of the Ischium, and fixed in the Edge of the Sacrum and Coccyx.' You likewife tell us ' The Coccygaeous Muscle and Ligament abovementioned are stretched across from Bone to Bone, by which, I suppose, you mean, that when the Woman is erect, that they then run horizontally: But Winflow favs fas I shew'd in my Essay) (2) 'That the Coccygæus anterior, ave Ischio-Coccygæus is fixed by a broad 'Infertion in the anterior Portion of the fmall Transs verie Ligament at the upper Part of the Foramen that the Back-park, in

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Ovale of the Os Innominatum. From thence in runs between this great Ligament and the Mufculus Obturator Internus, with which it is often confounded by Anatomists, and contracting in Breadth, it is in-

ferted in the lower Part of the Os Coccygia's

The Coccygaus posterior five facto Coccygaus is fixed to the Inner, or concave Edge of the sage first Vertebre of the Os Sacrum, to the inner and 4 lower Edge of the Ligamentum Sacro-Sciaticum, and to the Spine of the Os Ischium; from thence contracting in Breadth, it is inferred above the former Mufcle? Whence it is evident they do not run across, as you tell us. You have omitted to give us an Account of the Distance betwixt the Ischium and End of the Coccyx, whether accidentally or designedly you best know; but I have acquainted you, (a) they are about two Inches diffants you must, however, allow, that they are not fo far afunder as the fame Part of the Ischium and Sacrum, which you have fixed at two Inches and a Half; and we do not yet know of any Muscle, Ligament, or Fibre in an Animal, as I before mentioned, that can bear to be extended one Half, or near Half of its whole Length, without breaking, or being fo much overftretched as never to return to its former State. This being a Fact, and the Foundation upon which I, in my Midwifry, have built, you ought to have taken off the Force of my Argument, and to have shown to a Demonstration, how the Knowledge of the exact yielding of the Coccyx can be obtained. Significantly soft a cross shall

You fay, (b) That on the whole, it is of the utmost Consequence to know, that the Brim of the Pelvis is wider from Side to Side than from the Back to the Fore part; but that at the Under part of the Basin, the Dimensions are the Reverse of this Proportion' (which I deny, and have given my Reafons above for fo doing) ' and that the Back-part, in

the Skeleron belig that on reduck, the Person may (a) P. 371. (b) P. 81. ( ( ) G 3 Alon ( )

Point of Depth, is to the Fore part as there to one,

I must remark, that as the knowledge of this is of such Confequence, and as I had published my Reasons before you had printed your Book, you ought to have been particularly full in conduting my Arguments, You ought to have been very cautious in advancing any Thing as a Fact, but what was demonstrable, and this was the more incumbent upon you, as you contradict others of great Authority, and make a new Assertion; producing only you Greatis Dichard, which may indeed pass upon your Pupils, but not upon the more knowing Part of Mankind.

You have made (6) the Width of the lower Part of the Politis to be naturally the fame, which is not true in fact, for the Distance is generally former hat longer from the Pubes to the Coccyn, than from Side to Side.

I made likewise observe, that what you say confirms what Thave inentioned (d) about the Impossibility of giving the boasted Assistance of introducing a Thumb or Finger to press back the Coccyx, as that Thumb or Finger will take up more Space than the Coccyx can yield.

Month of Pregnancy, is reclined backwards, or halffitting half-lying, the Brim of the Pelvis is horizontal, and an imaginary streight Line, descending from the Middle Space between the Navel and
Scrobiculus Cordis, would pass thro' the Middle of
the Cavity of the Pelvis. So that supposing the
Person erect, the Top of the Pelvis, from the upper
Part of the Sacrum, inclines downwards and forwards,
till it comes to that Part of the Pubes over each Foramen magnum. This is evident to any Berson who
will examine the Skeleton, from which the Muscles,
&c. have been just differed; and let his Eye be
placed upon an horizontal Level with the Pelvis; or if
the Skeleton be laid flat on its Back, the Person may

(c) P. 78. (d) Poffer. P. 2, 3. (e) P. 77.

look perpendicularly upon the same Part, and he will then only see the End of the Coccyx under the Union of each Bone of the Os Pubis; so that it it be as you say, from the Top of the Sacrum to the Coceye five Inches, and the Depth of the Pubis two Inches, then the Level of the Top of the Sacrum will be above the Top of the Os Pubisfull ewo Inches at least, and as the Coccyx is not fo far from the upper Part of the Center of the Pelvis. as the lowest Part of the Ischimm from the same Level. in a natural State, the Head of the Child must touch the Coccyx as foon as it can reach the lower Part of the Ischium, if not fooner; because, when a Person fits erect upon an horizontal Level, the lower Parts of each Ischium supports the whole Body; whence Deventer calls 'em Offa Sedenteria. By this wife Contrivance the Coccyx (which is ealier bent inwards than outwards) is guarded from being preffed or broke inwards, wherefore it is not so low down upon an horizontal Level as the lower Parts of the Ischia; Quod erat demonftrandum.' For if the Back Part of the Pelvis be then measured from the Level to the Top of the Sacrum, it will be found to be full five Inches and a Half, whereas, on the Fore Side, from the faid Level, it will be only about three Inches and a Half at the most; the Side is not twice, nor the Back Part three times the Depth of the Fore Part, when the Woman is erect, because from the Back to the Fore Part of the Pelvis the Brim descends.

You say, (f) 'The Child's Head, that has not been mishapen, by the uncommon Circumstances of the

Labour, is commonly about an Inch narrower from Ear to Ear, than from the Fore to the Under-part

stof the Hind-head. or present seit.

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I must observe that you have omitted to give us the other Dimensions of the Head, because then your Hypothesis, I conceive, would have been overturned: but I shall endeavour to make up that Defect for the

(f) p. 85. G 4

Benefit

Benefit of the Reader, and this I shall do from my own Book, where I said, (g) that from the Front to the Back of the Head is sour Inches 16; from the Chin so the Back of the Head five Inches 16; the Depth of the Head from the Top to just below the Ears three Inches 16; from Side to Side of the

Temple three Inches.

Now then, supposing the Distance from Ear to Ear to be three Inches, or three and a Half, which is generally the largest, that from the Fore to the Under Part of the Hind-head, is one Inch more; and you have (b) before made the lower Parts of the Pelvis to be equally distant from each other, That is, four Inches, and one Quarter; but when the Child's Head presses against the Coccyx in the Birth, it will yield one Inch, that is, the Distance then becomes five Inches and a Half betwiet that and the Pelvis, which is three Quarter of an Inch more than you yourself acknowledged the Child's Head required, even if the Parts of the Head do not yield at all.

And I must likewise observe, that you never met with a Child's Head naturally made whose Distance from the Egre to the Under-part of the Hind-head. is five Inches and a Quarter, after the Bones have been fourezed and moulded by a natural made Pelvis, whose Diameter from Sacrum to Pubes, is about four Inches and a Quarter, as you before told us. Belides (i) you fay, 'When the Head is so far advanced, that the Backopart of the Neck is come below the Under-part of the Pubes, the Forehead forces the Coccyx, Fundament and Perinaum backwards and downwards. fo that unless the Diameter of the Head from the Backpart be above four Inches and a Quarter, when the Bones thereof have yielded, which is very rare, the Coccyx need not to give Way at all; efpecially if any Person will confider what you fay in Page 92 and 208, that

the Perinseum extends from this Border (the Fourof chette or Franum) to the Anus, being about one Inch, or one and a Half in Length; the wrinkled Part of the Anus is about three Quarters of an Inch in Diameter, from thence to the Coccyx the Distance is about two Inches; so that the whole Extent, from the Fourchette to the Bone, amounts to about four Inches, or four and a Quarter. And you may very well add one Inch more, at the last, from the Four-chette to the Os Pubis; which will make about five Inches one Quarter, betwirt the Pubes and Os Coccygis, without the last being extended at all by the Child's Head. From all which Remarks it follows, that, in general, where the Child is naturally made, althe the Woman has a difficult or præternatural Labour, yet the Child's Head can never require the Coccyx to be diffended back one Inch, nay it is impossible it should, without breaking or being diflocated, the Coccyx, as may be proved from your own Account, for you have faid, (k) 'That the Depth of the upper Part of the Sacrum to the lower End of the Coccyx is about five Inches, but when the Coceyx is stretched outward and backward, the Distance will be one Inch more. You then say, from the Extremity of the Coccyx to the Middle of the Sacrum, the Sweep hearly represents a Semicircle, that is, one Side of a Circle, whole Diameter, we'll suppose to be four Inches, which will be about the Matter, as the whole Diftance to the Top of the Sacrum, is about five Inches from the Coccyx, The Circumference of this Circle will be twelve

The Circumference of this Circle will be twelve Inches, the Moiety of which is fix Inches, which is the Distance from the End of the Coccyx to the Middle of the Sacrum, if you follow the Inside of the Supposed Semicircle; about one third of which will be taken up by the Bones of the Coccyx, which, as I observed, are nearly as often only three as four in Number; the first of which cannot move at all, or

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but very little. The Diltance between the Infide of the Cavity and Outlide Convexity, at the Union betwirt the Sacrum and Coccyx, we may lately fix at three Courses of an Inch, and the thin End of the Coccyx to be near a Quarter of an Inch. By this then it is evident, that the Bones of the Coccyx must on the Infide be each full Half an Inch diffant, and then the Bones must be absolutely separated; and if they ever join again, they will unite as a broken Bone, and become one solid Piece, so that it can never yield afterwards; whence every Woman can have only one Child to be born alive, if your Doctrine be just.

Having done with the Coccyx, I'll now proceed to the Child's Head, which, I observed above, is naturally never to large as to require the Coccyx, of a regular made Pelvis, to be extended one Inch, altho no Way compressed; and when the Head is large, and has been any Time in palling betwixt the Sacrum and Pubes, which, in general, are about four Inches distant, that then the Head is moulded in an obling Form, as (1) I observed. And you fay, (m) in all laborious Cases, the Vertex comes down, and is e lengthened in Form of a Sugar Loaf, nine and forty Times in fifty Inftances; which compressed Form, I must observe, has been made in the Passage betwixt the Sacrum and Pubes, is only about four Inches Distance, and that at most, for which Reason there is less Occasion to extend the Os Coccygis, as the Head is then of a lefs Diameter after, than before it became ablone like a Sugar Loaf, which Shape it will retain for a considerable Time after its Birth, if proper Means be not tifed to reduce it again; for the more oblong the fame Substance is made, the transverse Diameter must be leffened in the same Proportion.

You likewise say, (n) That Part of the Head which presents, is the Space between the Fontanelle

(1) Politer. P. 3. (m) P. 90. (n) P. 85.

and where the Lambdoidal Sature crosses the End of the Sagittal Suture, which you call (a) The Vertex or Crown of the Head, and others call the Apexy for in most laborious Cases, when the Head is squeezed along with great Force, we find it present into a very oblong Form, the longest Axis of which extends from the Face to the Vertex. In another Place you say, (p) That betwint the Vertex and Face or Forehead is greater, than that from the Forehead to the Back Part of the Hindhead or Neck.

You then proceed, and fay, " From whence it appears, that the Crown or Vertex is the first Part that is preffed down, because in the general Preffere, the Bones at that Part of the Skull make the leaft Refiftance, and the Face is always turned upwards. Here you have attempted to affign a Reafon why the Vertex or Apex is first pressed down, because, you Tay, The Bones of that Part make the least Refistance, but I humbly conceive a better Reafon may be offered; for when the Head prefents naturally, the Apex offers at or near the Center of the Opening of the upper Part of the Pelvis, because the Chin is pressed against the Child's Breast and if either the Head be large. or the Pelvis Strait, when the Pains protrude the Child, its Head on each Side must be greatly comprefied by the Parts of the Mother's Pelvis, and that Part of the Head which is nearest the Center of the Opening of the Pelvis, meeting with no Reliftance in that Place, will become the most protuberant, as you inform us in the fame Page; for you fay, I fometimes indeed this Lengthening or Protuberance is found at a little Diftance from the Vertex, backward or forward, or on either Side; and formetimes the Fountenelle prefents, while the Vertex is preffed

Expulsion of the Child 1200 at the Bottom of the

and remains quite flat. Whence it is evident that the Lengthening is not owing to the Bones at that Part of the Skull making the least Resistance; for was that the Case, the Protuberance would always be in the same Part of the Head:

You said above, 'That the Crown or Vertex is the first Part that is pressed down.' By which it is evident, that in a natural Way it is the first Part that presents, as it really does. But in other Places (q) you say 'When the Head first presents itself at the Brim of the Pelvis, the Forehead is to one Side, and the Hindhead to the other, and sometimes it is diagonal in the Cavity; thus the widest Part of the Head is turned to the widest Part of the Pelvis, and the narrow Part of the Head from Ear to Ear is applied to the narrow Part of the Pelvis, between the Os Pubis and Sacrum.

The chief Hint of this imaginary Polition you have

from Ould's Midwifery, altho' you have altered his Syftem, but I think not in the least for the better.

In my Estay (r) I have sufficiently consuted what Ould has laid down, and have proved, from the best Authorities, that whenever the Head presented, with the Chin to either Side of the Pelvis, the Birth was difficult and dangerous. I likewise shew'd, (s) 'That in the natural Posture of the Fœtus in Utero' (which I accounted for (1) the Chin of the Child lies on the Brealt, which you allow to be right, (u); 1 therefore faid, That Ould, in order to support his Opinion, should have shewn, from the Structure and Mechanism of the Parts, some probable Method of changing the original Posture of the Chin, on the Breatt, and turning it on one Side, to the Shoulder. It cannot be the Womb, for that, in its quiet State, presses equally on all Sides of the Child's Head. especially while the Waters are in the Bag; and when it begins to act, the first and greatest Effects for the

<sup>(7)</sup> P. 87. 221. (r) P. 50. P. 120. (s) ib. P. 122. (t) P. 39. (z) P. 175.

Expulsion of the Child, are at the Bottom of the

Womb, which prefies directly on the Back Part of the Head, and turns it immediately downwards

with its Face towards the Mother's Back of Hence we fee, that this Change of the Posture of the Chin

cannot happen in the Child's rotatory Motion in the

Womb; and every Pain afterwards prevents the

Child from turning it, as it preffes the Chin more

forcibly against the Breast 20 guanan al amount which But as you could not answer this Argument, you have endeavoured to prove, that the Situation of the Child in the Womb is not, as I, from the best Authorities, have shewn; and That the Foctos in Utero bas one of its Sides always turned to the Mother's Back, and the other to the Fore-part of the Wombs which your attempt to prove in the following Manner (w). First, you fay, That the Foetus in Utero being contracted into an oval Form, the greatest Length is from Head to Breech ; but the Distance from one Side to the other is much less than that from the Fore-part to the Back-part, because the Thighs and Legs are doubled along the Belly and

Stomach, and the Head bended forwards on the Breath. fining unit ni austration of indragation &

Secondly, f The Uterus being confined by the Vertebræ of the Loins; the Distance from the Back to the Fore-part of it must be less than from Side to

Side c fo that in all Probability one Side of the

Feetus is turned towards the Back, and the other to

the Fore-part of the Womb; but as the Back-part of the Uterus forms a little longish Cavity on each

Side of the Vertebræ, the Fore-parts of the Foetus

" may therefore, for the most Part, tile more back wards than forewards, and no a grant war and the rid

The first Part of the Argument I shall, for the prefent, allow you, but the latter is not true in Fact विभागितियां। के में वृत्ती तो काम अवका रे अवि क्षेत्रियां के अवित

referres.

coccetant your Hypothelis, or System wand this I shall, in pair, attempt to do from your words.

fhall, in part, attempt to do from your own Merch.

You tell us (x), The Infide of the Bain (Pelvis) is bent downwards into a Goncare behind, and defends in a streight Line before, while the Vertebrae of the Luins turn backwards, making an obtuse Angle with the Sacrum. You also say (y), An imaginary Line taking its Rise in the ninth Month of Pregnancy, from the middle Space between the Navel and Scrobiculus Cordis, will pass through the

and dame Point in the Pelvis. And a day of ages of the

By this Fabric we find there is a far greater Space betwist the Vertebræ of the Back and the Fore-part of the Abdomen, (which will yield to a compreffing Body) than between one Side and the other; for they being confined by the Part of the Ribs, cannot give way fo eafily as the abdominal Muscles will do By this oblique Inclination, upwards and backwards, of the Vertebras of the Loins and Back (2), the Child (as I from the best Writers have thewn) feems, as it were, to fit with its Breech upon the Projection of the lower Parts of the Venebras of the Lidins (a); or in other Words, the Womb refts, in Part, against that Place, (which otherways must wholly be sipported by the Brim of the Pelvis) while the upper End of the Uteres goes to the Midway betwint the Scrobiculus Cordis and Navel; by which Means, as the Womb inclines forwards and upwards, and the Ventebrae go backwards and upwards also, there is a confiderable Space lefe for the Stomach to occupy : And as the Vertebre project into the Cavity of the Abdomen, they make a large Cavity on each; Side for the Kidneys, Spleens and Inbetter to every late wadged among the Bones, the

<sup>(</sup>a) P. 81. (b) R. 77. (c) See my Effay, Table II. fig. 1.
(a) Paraus fays, dapt 13. Diffectis gravidarum muliculm cadameribus, tenellos adhuc Foetus, quales quadrini funt, animadverti, figurâ orbiculari fitos, capite in genua reclinato, geminis manibus fub genubus, calcibus verô ad nates junctis.

testines, wherein they lie safe from the Compressive of the Womb, which is chiefly supported by the Spine of the Back, and by the Brim of the Pelvis. Hence it is evident, that, in the last Months of Pregnancy, the Liver and Viscera of the Abdoman cannot be forced up into the Thorax, as you have afferted (b); as you might have been convinced of, if you ever law a Woman opened, who died near her full Time undelivered. and had made proper Remarks thereon. The Afcent of the Uterus and Stomach alone is sufficient to orcasion the Dylppea, which some are afflicted with in the latter Stages of Pregnancy. But to return As the Fore-part of the Abdomen always projects most in Precogney, and as the upper Part of the Sides thereof cannot yield (the Contents being confined by the Ribs) the greatest Diameter is from the fore to the Hind-part of the Woman; and the least Diameter is from Side to Side; and therefore the less Diameter of the Child will be more proper to answer the less Diameter of the Mother's Abdomen, as you faid above, and confequently its Back should be to the Mother's Back. otherways the Head would press against the Woman's thort Ribs in the last Month of Pregnancy; whereas if both the Child and Uterus be placed tight, the Head ar is to be felt betwixt the Navel and Scrobiculus Cordis: and fometimes I have known it reach the Scrobiculus (c). But left this Argument should not answer your End, you attempt to bring another, which, in my Opinion, is no better founded than the former. You tell us, (d). That it is the Child that turns itself, for you say, The Forehead is turned to the Side of the Relyis, because the Basin at the Brim is widely from Side to Side, and frequently before the Head is pushed in, and fast wedged among the Bones, the Child (aften a Pain) is felt to move, and turnit to that Side or Situation in which it is least pressed and hurt; if it was not prefenting in that Polition before

(b) P. 149. (c) P. 329, (d) P. 221.

You here take it for granted, that the Child (after a Pain) is felt to move, and turn itself. But I believe you will find no judicious Writer or Practitioner that will allow you this Polition. When the Child's Head turns from the Fundus towards the Os Uteri, at the very Beginning of Labour, the Mother may indeed be fenfible of the Motion, as the may be to that of its Feet and Hands, after it is turned; but that she should perceive the little Quarter Rotatory Turning of Chin from its Breast to the Shoulder, will scarce be allowed you, especially while the Waters are in the Bag, and the Mother is in Pain: and when the Head is preffed against the Top of the Pelvis, even before it be fast wedged, the Child has not Strength to move its Head; and when the compressing Force is abated, I believe no Person will imagine the Child can have Forelight and Sagacity enough to know, which Polition will injure it the leaft, during the next Pain: And I may add, that it is also necessary for it to know when the next Pain will begin, or elfe it must always hold its Face to one Side, to be in readiness. And if the Child was to move its Body as well as its Head, the Shoulders would be fixed on the Top of the Sacrum and Pubis, how then must it turn itself afterwards, for in that Polition it cannot be delivered? Moreover, this Paragraph contradicts what you told us before (e), where you fald it frequently bappens that the Woman never feels the Child stir during the whole Time of Labour; fo that the Reader, from your own Words, will find, That the Child is frequently felt to move, and turn the Head, and free quently the Mother never feels it to move at all. Whence you fee, that your Instructions are not so clear and perspicuous, neither is your Book so void of vain Hypothefes, as the Review Writer tells us, Number 111.

You say (f), That the Head of the Child must always be downwards, because in the 4th, 5th, 6th, and 7th Months, the Head for the most Part pre-

' sents.' This it will always do in a regular Way after

Labour-Pans, have begun, if the Waters do not come away too foon, as I have sufficiently explained before. But where Women have died without having had Labour Pains in different Stages of Pregnancy, the Child's Head has always been found at the Fundus Uteri, as Paraus observed before.

You then alledge, 'That by the Touch in the Vagina, the Head is frequently felt in the seventh

"Month, fometimes in the fixth, but more frequently

in the eighth Month, &c. if the same Women are

examined from Time to Time, till the Labour be-' gins, the Head will always be felt of a round Sub-

france, at the Fore-part of the Brim of the Pelvis,

betwirt the Os Internum and Pubis, through the

Substance of the Vagina and Uterus."

In one Place (g) you told us, 'That the Neck of an unimpregnated Uterus is one Inch and three Quarters in Length.' In another Part (b) you fay, 'That

at the fifth Month of Pregnancy, about half of the

Neck is extended; fo that, according to your Calculation, it may then be about seven-eighths of an Inch thick; and by the same Rule, at the Time you say ' the Child's Head is distinctly to be felt,' the Neck of the Womb is at least half an Inch thick. As this is the Case, how is it possible that you can tell the Head of the Child from its Breech or Knees, through fuch a thick Substance, especially while the Bag is extended by the Waters? And it is an Observation of the best Operators, that even when the Os Uteri begins to dilate, the Knees greatly resemble the Head, and are not easily distinguishable from it, till the Orifice be more dilated, especially while the Waters are in the Amnios.

A little above you faid (i), 'That the Uterus forms a little longish Cavity on each Side of the Vertebræ, and yet in other Places (k) you tell us, . The Womb is diffended in a globular Form.' How then can it

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<sup>(</sup>g) P. 95. (b) P. 117, 118. (i) P. 175. (k) P. 114, 118, 132. dod ? P. Tro.

both be glebular and have longift Cavities on each Side the Vertebræ? Which, according to you, would rather hinder it from being globular. Befides, as the Diameter from the Os Uteri in the Pelvis, to the Fundus Uteri (half way betwixt the Navel and Scrobiculus Cordis) is longer than any other, it is rather oval than globular, occasioned by the Compressure of the abdominal Muscles, and short Ribs, the Resistance upwards being the leaft, and the Fundus Uteri being at the same time more easily extended than that Part nearer the Projection of the Sacrum. The Womb may indeed be faid to be more globular before it rifes to high as to be compressed by any Part, as far as the Rigidity and Thickness of the Neck of the Womb will permit; but after it meets with any Resistance, the Form must be altered according to the Shape of the refifting Body, which it can the better do without injuring the Foetus, as the Bag contains fo much Water. Moreover, you tell us (1), That a Hog's Bladder being introduced at this Opening (of the Bag) and \* inflated when laying in Water, will shew the Shape ' and Size of the inner Surface of the Womb.'

If you mean that a Hog's Bladder thus inflated, will shew the 'natural Shape and Size of the inner Surface of the Womb,' then you have brought a strong Argument against your own Assertion, when you say, 'The Uterus is globular; for an inslated Bladder is always more oval than globular, and consequently must represent the Bag in the same Shape, whether it was globular or oval, while extended in the Uterus. Besides, supposing the Womb in the above-mentioned State, to be globular, you will find then it more difficult to account for the Side of the Child being always turned to the Mother's Back; for the Reason you produce to support your vain Hypothesis will not here hold good, because the Child being in a globular Vessel, filled up with the Waters, whether the Distance from one of its

Table of

Sides to the other, be more or less than from its fore to the Back-part, the Pressure must be equal, and consequently that cannot turn the Child's Side to the Mother's Back, as you precend to shew.

You say (m), at the Approach of Labour the whole Substance of the Uterus is stretched, the Neck and Os Internum, which were at first the Arongelt, become the weakest Parts of the Womb. and the fereithing Force being still continued by the Increase of the Foetus and Secundines, which are extended by the inclosed Waters in a globular Form. the Os Uteri begins gradually to give way.' But you have not affigned any Reafon why it gives way. May it not be owing to the Uterus (with what is within it) and the Vifcera filling up all the Cavity of the Abdomen, while the Contents of the Uterus grew more bulky? For as all the other Parts of the Uterus at that Time meet with relifting Powers, the Force from within is chiefly preffed against the Os Uteri, which, as it has no external Body pressing against it, to enable it to refift the Force from within, must dilate, and grow thinner?

You likewise in the same Place add, 'That in the Beginning of its (the Os Uteri) Dilatation, the nervous Fibres in this Place being more sensible than any other Part of the Uterus (which by the bye, is begging the Question) are irritated, and yield an unseasy Sensation; to alleviate which the Woman squeezes her Uterus, by contracting the abdominal Muscles.' Here you hint, that the Woman does this to alleviate the Pain; but in the next Page you say, That the Pain is increased by it; so that the Pain makes the Woman squeeze, and the squeeze ng increases the Pain, for which Reason the Woman is unable to continue this Effort as it occasions to violent Pain, and then there is a Remission; which Remission of Pain the Patient enjoys for some Time,

Pains. Pray what occasions this Remission? This is another Specimen of your Perspicuity and Clearness, so

much applauded by the Review Writer

Chin on one Side of the Pelvis, while its Head is at or within the Brim, but yet within the Os Uteri; to carry on your chimerical Hypothesis, you are also obliged to attempt to shew how the Chin is replaced after the Head is within the Pelvis, and below the Brim; and this you attempt in the following Manner.

You say, (n), The Head (of the Child) being squeezed along, the Vertex descends to the lower

Part of the Ischium, where the Pelvis becoming a narrow at the Side, the wide Part of the Head can

proceed no farther in the fame Line of Direction;

but the Ischium being much lower than the Pubis, the Hind Head is forced in below this last Bone,

where there is the least Resistance.'

In another Place you told us, (o) 'That the upper A Part of the Os Externum is fituated immediately below the Os Pubis, the lower Edge of the Frænum or Forchette, which being joined to the lower End of the Coccyx, is near upon a level with it' (fupopoling the Woman to be fitting erect); but the Coccyx is not fo low down as the lower Part of the Ifchium; for this last supports the whole Body when fitting, and therefore Deventer called those Bones Offa Sedentaria. And, as I observed before, the Top or Brim of the Pelvis, from the upper Part of the Sacrum inclines downwards and forwards till it comes to that Part of the Pubis over each Foramen Magnum; as is evident to any Person, who will examine a Skeleton, when erect, and look at the Pelvis, with his Eve upon the same Level, for then he will only see the End of the Coccyx, under the Union of the Os Pubis; but look at it Sideways, upon the fame Level, and he will

[ 101 ]

fee that the Coccyx is higher up than the lower Part of the Os Ischium; therefore the Head of the Child will reach the Coccyx before it can reach the lower Part of the Ischium; neither is there so great a Difference betwixt the lower Edge of the Os Pubis and the lower Part of the Ischium, as you seem to insinuate. You say (p) 'That as the Ischium is much lower than the Pubis, the Depth of (the first being sour and the latter two Inches, (q) the Hind-head is forced below this last Bone, where there is least Resistance. The Fore-head then turns into the Hollow at the lower End of the Sacrum, and now again the narrow Part of the Head is turned to the narrow Part of the Pelvis.'

You likewise told us a little above (r) ' that the Width of the lower Part of the Pelvis is naturally the same in both Dimensions, until the Coccyx be presented an Inch backwards and outwards by the Child's Head.' Therefore, how can you say, ' that now again the narrow Part of the Head is turned to the narrow Part of the Pelvis.' When at the same Time you allow the Dimensions are the same every Way, until the Forehead of the Child enlarges one Diameter, by pressing out the Coccyx; long before which Time the Head must be turned, and the Vertex (according to your Account) must be got out of the Pudendum, as it projects the first.

In my humble Opinion, I think the turning of the Chin to one Side of the Brim of the Pelvis (when either the Passage is so strait, or the Child's Head so large, as not to pass easily) and the replacing it when within the Cavity, may be more rationally and mechanically accounted for in the following Manner.

Whoever will consider that the upper Part of the Sacrum is convex inwards, and projects nearer to the Pubis than that Part of it which is betwixt the Projection and the Ilium on each Side, and that the Fore-

(p) P. 87, 222. (q) P. 79. (r) P. 78. H 3

head is fomewhat round or circular; and at the famo Time will remember when a Child prefents regularly for the Birth, That the Apex and Back of its Head is towards the Pubis, and the Fore-head towards the Sacrum (its Chin being fixt on its Breaft) and he will foon perceive that the Fore head and Top of the Sacrum will be in contact only in one Point like two Balls. If, therefore, the Head be not two large, nor the Pelvis too strait, the Fore-head will easily slip into the Pelvis in that Polition. But should either of those vary, then the Apex, or rather Back of the Head, will be strongly pressed against the Pubis, and the projecting Part of the Sacrum will compress the round Part of the Fore-head; in which Case, let the Person also confider, that the pulling Force is apply'd immediately to that Part of the Head where the first Vertebra of the Neck joins it, and that the Center of Motion is there, and he will foon be convinced, what a very small Obliquity will make the round Part of the Fore-head flip from off the projected Convex Part of the Sacrum into one of its concave Sides (where there is no Refiltance) effecially if he confiders the great Difficulty that is required to keep two round Bodies in the same Point of contact, when the Force is apply'd in the Manner as above, while there is no Refistance on each Side. This any Person may soon be satisfied of, if he will apply the H ad of the Child that is large, to a strait Pelvis, and let the propelling Force be in the same Manner apply'd as while the Child is in the Womb. I must farther add, that that Part of the Child's Head which is compressed, either by the Pubis or Sacrum, will yield more confide ably than the Back or under Part of the Head, and is more firm and hard, to which the propelling Force is applied. Thus, you fee, here is no Occasion either to misplace the Child, or to allow it any Sagacity to account for this Alteration, fince the Mechanical Laws of Motion, &c. are fufficient for the Purpose. 45 Broth (a) reside 1 (a) 1 tomb ca

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No more difficult is it, I think, to account for replacing the Chin, after having been thus forcibly turned to one Side, and kept in that State, till it has passed into a wider Part of the Cavity of the Pelvis, where there is Room sufficient (before the Head advances yet a little farther) for the Antagonist Muscles of the Neck to act and bring the Head into that Position which is least painful to the Child.

You have told us (s) 'That there is one Objection against the Fœtus in utero receiving its Nourishment by Absorption, which has never been fully answered, namely, that if the Placenta adheres to the lower Part of the Uterus, when the Os Internum begins to be dilated, a Flooding immediately ensues, and the same Symptom happens upon a partial or total Separation of the Placenta from any other Part of the Womb, whereas no such Consequence follows a Separation of the Chorion.' You likewise, in another Place, (1) suppose 'The Chorion adheres to the inner

Surface of the Womb.

If it be granted what I thought I had proved at large, (u) and this Objection does not in the least invalidate that Proof, viz. that the Communication betwixt the Mother and Child is carried on only thro' the Placenta and umbilical Vessels, then a Separation of any Part of the Placenta from the Womb is always attended with a Flooding; but no fuch Thing happens from what you call a Separation of the Chorion, which is only in contact with, but has no Adhesion to, the Womb, being separated by the Mucus, which Nature fecretes for that Purpole; for did it adhere, as the Neck of the Uterus extends (which is not compleated in a natural Way till the last Month) the Bag, I fay, if it adhered, would be torn, and the Waters would gush our; and likewise in Time of Labour, whenever any of the Membranes (while the Waters were contained therein) were propelled to the Os Externum,

<sup>(</sup>s) P. 139. (t) 209. (u) From P. 24 to 31 inclusive. H 4 there

there would be an Hemorrhage, which, thence, alone, never attends it, unless the Placenta be separated in or Part or wholiy & gardage very

droln one Place you told us (w) That at the fifth Month the Fundus Uteri rifes to the Middle Space betwixt the upper Part of the Pubis and Navel.' But in another Place, you fay (x) ! That towards the A Beginning of the fifth Month, the Uterus fills all the upper Part of the Pelvis, and then it begins to rife upwards into the Abdomen.' Are these Instructions fovery clear and perspicuous?

You then proceed, and inform us, (y) that when The Uterus presses against all the Parts of the Pelvis, the Pressure fometimes produces an Obstruction of Urine, and Difficulty of going to Stool, which will be attended with a Degree of Inflammation in the Subflance of the Uterus, the Vagina, Mouth of the Bladder, and Rectum, from whence violent Pains and a Fever will enfue. In order to remove or alleviate these Symptoms, Recourse must be had to Bleeding and Glysters, the Urine must be drawn off by the Catheter, Fomentations and warm Baths must be used, and this Method must be occasionally repeated until the Complaints abate, and they commonly vanish in consequence of the Womb's rising higher, so as to be supported on the Brim of the Pelvis.

As the Symptoms, you fay, ' commonly vanish s in consequence of the Womb's rising higher above the Brim of the Pelvis, or, in other Words, when the Compressure (which was the Cause) is removed, certainly the Uterus should be raised up, as I directed in a like Case; (2) for otherwise, as long as the Cause not only remains, but rather increases, the Effect will keep the fame Proportion: And, therefore, altho' Bleeding, Glysters, and drawing off the Urine may give a Momentary Relief, they cannot perform the Cure;

but as for Fomentations and Warm Baths, they are for far from being proper, that they are by all Means to be avoided, as they may occasion Abortions, by promoting an Impulse of Humours towards the Womb; wherefore they are often prescribed to promote the Discharge of the Menses, and consequently must be dangerous to a pregnant State, especially at a Time when so great a Compression of the Womb threatens an Abortion, as, in the Case abovementioned, it must do.

You tell us (a) 'That all the Complaints above described, namely cedematous and inflammatory Swellings of the Legs, Thighs, and Labia Pudendi,

Pains in the Back, Loins, and Belly, with Dyspnæa

and Vomiting are removed or palliated by the fol-

Evacuations) is generally relieved by Bleeding at the Arm or Ancle, to the Amount of 8 or 10 Ounces.

I must here observe, that inflammatory and cedematous Tumours do not proceed from an Obstruction of the same kind of Vessels, the first being caused by a Compressure or Obstruction of the Blood Vessels; the last by the Obstruction of the Lymphatics, some of which terminate in a large Gland, fituated in the Bifurcation or Division of the Iliac Vessels, as Afruc (b) takes Notice of. How far Bleeding may be of Service in this Cafe, I cannot conceive; because to me it appears, that neither the Symptoms can be abated, nor the Cause be removed thereby; for if the Person be bled in the Arm, it may lessen the Quantity of the Mass of Blood in general, but it cannot relieve the lower Parts, because the cedematous Swellings there (you acknowledge) are occasioned by the Weight of, or rather upon, the Iliac external Veins, which is not in the least removed hereby; and while the Cause remains, the Effect will, cæteris paribus remain the fame. And bleeding in the Ancle (if it can be done) will endanger an Abortion, as well as a Mortification

<sup>(</sup>a) P. 149. (b) Of the Diseases of Women, Cap. 1. P. 12.

in the Part opened : But when the Swelling is confiderable, how will the Surgeon find the Vein? especially as you tell us in the next Page, when it (the cedematous Swelling) extends in a great Degree up to the Thighs, Labia Pudenda, and lower Part of the Belly, in a Woman of a full Habit of Body, Venæfection is neceffary, because the cedematous Swelling proceeds

from a Compression of the returning Veins, and not

from a Laxity, as in the Anafarca, and lencophlegmatic Conflitutions,

From what I shewed just above, it is evident, you'l

confound these Things; for these two forts of Tumours proceed from very different Caufes, and the Laxity, in these Cases, is rather the Effect than the Cause of an Anafarca or Lencophlegmatic Constitutions; yet, I perceive, you prescribe the same Method as in those Complaints, viz. puncturing (c) the Parts accasionally, in which Case, nothing but a clear Lymph will come out, just the same as in an Anasarca. In one Place, you fay, (d) ' When a pregnant Woman is afflicted with Gravel in the Kidneys, you prescribe an Emplastrum Roborans to the Back; and, and when Pains are in the Loins and Belly, extending to the short Ribs, occasioned by the fretching of the Uterus, you order Emollient Unguents to be rubbed on the Parts.' What Relief the Patient is to expect from these Things, you cannot eafily make appear; for a Plaister can no more remove a Gravel in the first Case, than emollient Unguents can remove Pains in the Loins and Belly, fince their Effects go little farther than the Skin, and therefore the Muscles can't reap any Benefit therefrom.

You tell us, (e) ' The Child being dead, and the Circularing Secundines confequently being destroyed, the · Uterus is no longer stretched.' But I must observe, that as long as the Contents of the Womb remain within. an Absorbit, as well as to

it must continue to be stretched, whether the Child be

You say, (f) A Flooding during Pregnancy will be more or less, as there is more or less of the Pla-

centa separated from the Womb, and when this hap-

pens in a very small Degree, the Discharge may,

by right Management, be fometimes stopped, and

every Thing will proceed to full Time.

Whoever knows the true Fabric of the Womb, and of the Placenta, will be convinced, that whenever the Placenta, either wholly or partly, is separated from the Womb, that it never adheres again to it. That pregnant Women fometimes have a Discharge of Blood, which may be stopped, and both Mother and . Child do well, is a known Fact; but then it does not appear that this Blood comes from that Part of the Womb, whence you suppose the Placenta to be separated; nay, it is evident it comes from other Parts, which is accounted for in my Essay (g), where I have given general Rules, whereby to know what Discharge of Blood, during Pregnancy, is dangerous, and what is not fo; by which the Readers may know what Method to take accordingly, without injuring either the Woman or Child.

You tell us, (b) 'When the Head (of the Child in the Birth) is drawn (by the Navel-string, or by the Shoulders sticking) and the Delivery hath been retarded during several Pains, one or two Fingers being introduced into the Rectum, before the Pains go off, ought to press upon the Forehead of the Child, at the Root of the Nose, great Care being taken to avoid the Eyes: This Pressure detains the Head, till the Return of another Pain, which will squeeze it farther down, while the Fingers pushing slowly and gradually turn the Forehead half round outwards and half round upwards.'

You have here recommended a Method of Practice that is far from being of any Benefit to either Mother or Child, but may do great Injury to both. For

First, to introduce the Finger into the Anus, during the Pain, mult be no very easy Matter; because then the Child's Head is pushed strongly down, and must thereby straigen the Entrance, by the Turgency of the Hæmorrhoide Veffels against which the Head is probelled more during the Pains, than in the Interval.

Secondly, the Pressure of the Finger requisite to confine or turn the Child's Head, must be very great, and consequently endanger the bringing on an Inflammation in the Parts compressed, as well as endanger the burfting of the Blood Veffels, whence a Fiftula in Ano

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might enfue. It man , the learned , at thew objections Thirdly, if the Fingers are to push the Forehead balf round outwards, and balf round upwards, they must at the same Time twist or force up that Part of the Rectum and Vagina which is betwixt them and the Child's Head, in the same Manner, which is not to be done, but with too much Violence, as is evident to any Person who knows the Structure of the Rectum and Vagina, and the Parts to which they are attached.

Fourthly, the Child may be greatly injured by a Pressure at the Root of the Nose, whose Bones are but flightly attached to those of the Forehead, and will vield to a Pressure, altho' not very great. And when there is the Thickness of the Rectum and Vagina betwist the Finger and Child, the Operator cannot fo eafily judge what Part he compresses; and I must add. that the Pressure must be very strong to answer the Purpose; because it is to bold the Head fast till that Part of the Child that Auck in the Os Uteri be advanced, or in other Words, till the Uterus recedes upwards, and leaves the Child fixed as far as it had advanced.

Fifthly, the Bulk of the Fingers must take up a confiderable Space betwixt the Coccyx and Child's Head, and in fuch Proportion must injure both Mother and Child; the first by extending and crushing

the Parts more than necessary; the last by compres-

fing the Child's Head too much.

Before I proceed, It may not be improper in this Place to explain what is meant by Delivery; when, therefore, the whole Child, or any Part of the Child is out of the Os Externum, and there is never any Occasion to return it again, it is faid to be so far delivered.

You tell us, (i) that "Over and above these Ob-

ftacles, the Head may be actually delivered, and the Body contained by the Contraction of the Os Ex-

ternum round the Neck, even after the Face appears

externally.

I can't avoid taking Notice, that the Os Externum cannot contract round the Neck, but when the Face appears externally. Is not therefore this Observation,

prima facie, very clear and very ingenious?

I must likewise add, that in every Child, that is proportionably made, the Circumserence round the Head is the greatest of any Parr, especially as the Scapulæ yield so much to a small Force; and therefore, there is scarce a Possibility that the Os Externum should contract so as to delay the Birth, because where the Part that is largest has passed, the lesser will follow with very little Force. And should even the propelling Force abate, the Midwise can then very easily make up that Desiciency, by taking hold of, and pulling by the Child's Head; so that an Accident of this kind is not likely to happen, but in your Imagination.

I must also remark, that it is no small Surprize to me, that you can say, 'In this Case it was generally 'alledged, that the Neck was closely embraced by the Os Internum.' Had there been any Authors or Accoucheur who had afferted that the Child could be contained by the Contraction of the Os Internum, after the Head was delivered, and could be both seen and selt, you should then, for your own Credit sake,

have mentioned them.

ther and Child;

When the Head is delivered, because then the Os Internum is kept dilated on the back Part and Sides, by the Breast and Arms of the Foetus, unless it be forced low down with or before the Head. But how will they prove that the Os Internum can closely contract round the Neck of the Child, when the Head, which you say, is actually delivered, forces the Os Internum low down, with or before the Head?

You say, (k) When the Os Uteri and Os Exter-

You fay, (k) 'When the Os Uteri and Os Externum open with Difficulty, it will fometimes be found necessary to infinuate the Fingers with the Flat of the Hand between the Head and the Os Internum.'

If you mean that the Hand should be introduced, as directed when the Head is in the Os Uteri, then your Advice ought not to be followed; because, at that Time, the Introduction of the Hand between the Head and the Os Uteri is not only attended with Difficulty. especially during a Pain, but also with Danger; For. supposing the Hand to be thus introduced, it will add confiderably to the Bulk of the Child's Head, and will extend the Os Uteri more than necessary; whence a Laceration might happen: and the Hand thus pushed up, must likewise hinder the Child's Head from pressing against the Os Uteri outwards, which is the Method Nature takes to dilate it, and confequently is therefore the fafeft, and ought to be imitated as near as we can. Add to this that the Hand, being thus introduced, will exert its whole Force, chiefly on one Side, whereas Nature preffes equally on all Sides.

You then proceed, 'For when this Precaution is not taken in Time, the Os Uteri is frequently pushed before the Head (especially that Part of the Pubis)

even thro' the Os Externum.'

CAD

Altho' you fay, 'The Os Uteri is frequently, pushed thro' the Os Externum; yet I'll appeal to all Practitioners, whether it does not very rarely hap-

pen, even in People who are subject to a Descent of the Womb, before they become pregnant. And I woult observe, that in all Cases, where the Uterus descends, or is pushed forwards, as you have stated the Case, the Method directed in my Book is preserable to yours, (1) for I advise the Operator to introduce his Fingers into the Vagina, and when a Pain forces the Child down, let him either keep the Os Uteri, therewith, in its Place, or push upwards during every Pain; for by this Method the Head of the Child presses the Os Uteri outwards, and extends it no more than the Bulk of the Head requires.

You direct, (m) that when Labour happens to be lingering, the every Thing be in a right Polition, if the Patient be of a Plethoric Habit, with a quick.

frong Pulfe, the Woman must be blooded.

But I must observe to you, That Venæsection is so far from increasing, that it will lessen the Pains, as is well known by every common Midwise, and therefore ought never to be put in Practice.

You tell us (n), 'If the Placenta comes away with the Child, and it has not breathed, and a Pulsation

is felt in the Vessels, some People (with good Reason)

order the Placenta, and as much as possible of the Navel-string to be thrown into a Basin of warm Wine.

or Water, in order to promote the Circulation be-

tween them and the Child: Others advise to lay the

Placenta on the Child's Belly, covered with a warm Cloth; and a third Set orders it to be thrown upon

hot Ashes; but of these the warm Water seems to

be the most innocent and effectual Expedient.

best Method to preserve the Child to promote the Circulation through the Lungs, is to intercept that between the Child and Placenta; wherefore the suffering the Umbilical Vessels to remain open, that the Blood

can circulate thro' them, while the Placenta lies in the

Water, must be wrong.

The laying the Placenta indeed upon the Child's Belly, may be proper enough, as it may stop the Circulation, through the Umbilical Chord: But if the Person you copy from, has took this Hint from Mercatus, he then has misunderstood him; for he says (a), Item candem secundinam cinerique aut calidis pannis calefacere oportet vel in Pelvim calidum imponere, donec sufficienter puerulus incalescat; so that I humbly conceive the Pelvis Calidus is meant, that of some Person, in order to warm the Child, and not on the Child's own Belly.

You then proceed (p), Nevertheless, if the Placenta is retained in the Uterus, and no dangerous

' Flooding ensues, it cannot be in a Place of more

equal Warmth, while the Operator endeavours, by

' the Methods above described, to bring the Child to

Life. And the Character of the Arthur

You told us (q) before, 'That the Funiculus Um'bilicalis is about four or five Hand breadths in
'Length.' Now if the Placenta still adheres to the
Uterus, at least two Hand-breadths (if not three) of
the five, will be within the Pudenda, and only three, at
the most, will be on the Outside, which will admit of
very little Space to warm, move, shake, and whip the
poor Child in 'as you direct) during which Time the
poor Woman must be exposed to Cold, &c. &c. when
she ought certainly to lie at rest, and be kept warm
after she has endured the Toil and Fatigue of perhaps a
tedious and difficult Labour.

You direct (r), That if the Placenta is not immediately delivered by the Pains, and no Flooding ob-

' liges you to hasten the Extraction, the Woman may

be allowed to rest a little, in order to recover from

the Fatigue she has undergone, and the Child to re-

cover.

<sup>(</sup>o) See Spaebius, p. 1060. (p) P. 227. (q) P. 133. (r) P. 229, 232.

I must here observe, that an Operator may be deceived, and imagine the Patient does not flood, if the Placenta should close up the Os Uteri; and may therefore wait till Faintings, and a feeble intermitting Pulfe inform him of the Danger the Woman is in of dying. altho no Blood appears externally, wherefore fuch Hazards ought not to be rifked. The hand and hand and

You then tell us (s), That Part of the Uterus to which the Placenta adheres is kept still distended.

while all the rest of it is contracted.

I must remark, That all the rest of the Womb is not only contracted, but even to fuch a Degree, as to embrace the Placenta very closely; whence it is a strong Argument for the Extraction of it immediately after the Birth of the Child; especially as you inform us, in the very next Page, That the Os Internum, and lower Parts of the Womb arenot fretebed again without great Force, after they have been contracted for any Length of Time, when fo great Force may be required, as may endanger the tearing the Vagina from the Womb. And I have flewn in my Effay (t), from the best Authorities, as well as from my own Observations, that the Uterus will so contract in a very short Time; which proves the absolute Necessity of extracting the Placenta immediately, after the Delivery of the Child.

When the Placenta is to be extracted, you direct the Person ' to take hold of the Navel-string with the left

Hand, and pull gently from Side to Side, and defire the Woman to affift your Endeavour, by ftrain-

ing, as if the were at Stool, blowing forcibly into

her Hand, or provoking herfelf to reach, by thrust-

ing her Finger into her Throat; as Ould has di-

rected in his Midwifery (u).

Just above (w) you advised the Reader to let the Woman rest a little after the Child is born, in order

<sup>(</sup>s) P. 236. (t) Sect. 55, p. 131, Sect. 156, p. 132, and Sect. 157, p. 324. (u) P. 57, 58, (w) P. 229, 232.

to recover from the Fatigue she has undergone, before any Attempt be made to extract the Placenta; and now when you come to extract it, you fatigue the Woman greatly to no Manner of Purpose: For is it not citiel to put a Person upon straining, blowing, or boakening, when the has perhaps had too much of all these during her Labour? Moreover, by these Means a greator Quantity of Blood must be forced upon the Womb; whence the chief Resistance is but just taken off; hence violent After-pains, attended with Floodings, Inflammations in the Womb, &c. may enfue. And add to all this, that these painful Efforts will not anfwer the End, if the Placenta adheres to the Womb. For then, as every Part of the Uterus contracts, which is not extended by the After-birth, as you before told us (a), the Womb becomes almost like a Ball; and altho' by coughing, &c. it may be moved a little; yet as the Placenta is closely embraced by the Uterus, they move only as one folid Mass; and therefore these Means cannot haften their Separation: Nor yet is the Womb so much moved by these Efforts, as you seem to infinuate: For as it contracts it descends into the Pelvis again; and as the abdominal Muscles are then like a loofe Bag, their Parietes (as you call them below) being very lax, by the Discharge of the Waters, and Birth of the Child, they cannot compress the Uterus very much, especially as the more it contracts the more it is out of the Influence of the Muscles.

If hy these Methods you say (y), The Placenta cannot be brought away, introduce your Hand sowly into the Vagina, and seel for the Edge of the Cake, which, when you have found, pull it gradually along.

Why was not this Method recommended at first, especially as so many Advantages arise from it, and no Inconvenience can be occasioned thereby? Southwell (2)

<sup>(</sup>x) P. 236. (x) P. 233. (x) Remarks upon Ould's Midwifery, p. 42.

tells us, 'That when the Placenta does not immediately follow the Child, then it is absolutely necessary to introduce the Hand, and artificially to separate and extract it, which may be done with the greatest Ease to the Patient, and without the inhuman teazing a poor Woman already spent in Labour-pain, by compelling her to press to go to Stool, and vomit. And in my Effay (a) I have fet forth at large the many Advantage: that attend fuch Practice; and have fully answered all the Objections hitherto made against the immediate Introduction of the Hand into the Womb. after the Birth of the Child, and you tell us (in Page 375) when there are Twins, the Operator can introduce his Hand with Eafe, as the Parts are fully opened by the first Delivery; and I must observe, that when there are Twins the Children are generally smaller than at fingle Births; in which last Case the Parts will be more open, and consequently the Hand might be immediately introduced with still more Ease.

You then say, 'If the Funis is attached to the Middle of the Placenta, and the Part presents to the Os Internum, or Externum, the whole Mass will be too bulky to come along in that Polition; in this Case you must introduce two Fingers within the Os Externum, and bring that down with its Edge fore-

moft.

But I must observe, That if the Placenta be extracted immediately after the Birth of a Child at its proper Period for Delivery, it cannot be too bulky to come along in any Position; as is evident to every Person who is Master of its Composition, and therefore if it does not pass easily, it is owing to Neglect in not fetching it away before the Womb was too much contracted, and not to its Bulk or Position, although the Funis be attached to its Middle. In the next Place, if the Aster-birth adheres in the Manner you inform us, and the middle Part presents to the Os Internum, how can the Opera-

<sup>(</sup>a) Sect. 52, 53, 54.

tor reach it by only introducing two Fingers within the OsExternum, to bring it down with its Edge foremost, which I must observe is at that Time nearest the Fundus Uteria

Tou tell us (b), That while the Operator is about to extract the Placenta, and is employed in dilating the Os Internum, and inferior Part of the Uterus, let an Affiftant press with both Hands on the Woman's Belly; or while he pushes with one Hand, press with the other, in order to keep down the Uterus, else it will rise up, and roll about like a large Ball, below the lax Parietes of the Abdomen; so as to hinder you from effecting the necessary Dilatation.

In the first Place, this Compressure on the Woman's Belly must be very considerable to keep down the Ute-Woman, at a Time when the abdominal Muscles are to very fore and tender (especially after a tedious or difficult Labour) as scarce to be touched without giving Pain. And in the next Place it will not answer the End proposed; for after the Hand is introduced, the Placenta ought to be separated by some of the Fingers, while the rest of the Hand is kept in the same Position, which hinders the Womb from rolling about. And, thirdly, when the Operator is endeavouring to introduce his Hand thro' the Os Internum, he pushes gradually and gently opwards; fo that there is no Occasion to make this Pressure to prevent the Vagina from being tore from the Womb, as you feem to hint in the preceeding Paragraph: For if to great Force be required as to endanger the tearing the Vagina from the Womb, there must be as great, if not greater Force, requisite to keep down the Uterus, which no Woman can bear; and if the could, what must be the Consequence to the Womb, after being thus compressed? And I must further observe, that the greater the Pressure is on the Outfide of the Uterus, the more difficult it will be to dilate it by the Force within, as is evident to every Person who understands the Laws of mechanical Powers, and applies them to these Things.

Hence you see your Method of Practice in these Things is not so unexceptionable, as the Review Writer informs

us, Number III.

I am now to consider the various Methods of delivering a Woman of her Child, in all extraordinary Cases; by which I mean, when the Child must be turned to be extracted by the Feet, or be brought away

by Instruments.

The principal Intentions in the Practice of Midwifery are, first, to deliver the Woman with the greater Ease, Safety, and Expedition; and, 2dly, to preserve the Life and Limbs of the Infant. And as the Art of delivering a Woman of her Child and Secundines is entirely a mechanical Operation, whether it be done by turning the Child in the Womb, to extract it by the Feet, or by Affistance of Instruments; fo the mechanical Laws or Rules are to be our general Guide. "In which View you tell us (c), you began to consider the Art of Midwifery, and reduce the Extraction of the Child to the Rules of moving Bodies in different Directions; which your Eccho, the Review Writer, Number III. has repeated, and miftaken you to be the first Writer on this Subject that has gone upon fuch Principles.

As in extraordinary Cases the Child must either be turned and extracted by the Feet, or must be brought out by Instruments; I shall now first set forth the Advantages and Dangers that may happen to both Mother and Child in the former Case; whereby the Reader may know when to avoid, and when to use Instruments; and, 2dly. As there are various Instruments used by us, I shall likewise mention the Advantages and Dangers that attend the Use of each particular In-

strument, and the Manner of delivering a Woman therewith; whence the Reader, at one View, may judge which is to be chosen for the Purpose; and at the same time by knowing the Form of the Pelvis, the Shape of the Child's Head, and the Make and Manner of using each Instrument, and being Master of the Laws of Mechanics, &c. may eafily determine whose Method of Practice has the Preference.

What I offer on my own account I shall give my Reasons for, or quote my Authority; both which I shall, in part, extract from my own Ellay on Midwifery, with feveral Additions thereunto. For whenever a Person takes upon himself to advance any Thing new, or to contradict received Opinions and Prejudices, it is expected he should bring valid Proof for what he ad-

vances.

What I mention on your Account shall be in your own Words, as I have hitherto done; for I think to paint Things in worse Colours than they ought to be, is not candid; altho' to raife every Objection that can be done is every Man's Duty, and he becomes a Friend to the Public. And I must add, that where absolute Certainty can't be had, the best Reasons are to determine: And when a certain, fafe, and eafy Method can anfwer the End proposed; all other less certain, more tedious and dangerous Ways should be avoided.

Sect. I. The Injury that may be done to the Mother by turning a Child in the Womb, and extracting it by the Feet, is by burfting or tearing the Uterus, when it has been too long a Time, and too much contracted round the Child, occasioned either by too early a Difcharge of the Waters, or too small a Quantity of them, while the Breech and Feet are at, or near the Fundus Uteri; especially if the Child be of a great Leugth: For in this Case, supposing the Operator could get down a Foot, or both the Child's Feet, it might be very difficult, if practicable, to pull down the Breech, and push up the Head, especially if the Pains should be very ftrong, because the Body of the Child would

be nearly parallel to the Thighs and Feet, and therefore the Head would be jammed stronger against the Brim of the Pelvis, the more the Operator should pull; and if he should be able to turn the Child, the Force so exerted might burst the Womb: In this Situation of Affairs the Head must be brought out first by such Means as hereaster will be explained, An Instance of this

Kind happened lately in this City (York).

During the whole Time of Pregnancy this Patient was in a very good State of Health; and the Child seemed to lie higher up in the Abdomen than is costomary; and the Mother was remarkably big, especially towards the Approach of Labour, which was forme Weeks later than was calculated. When Labour came came on, and the Waters were discharged, the Female Midwife (a very eminent Woman) finding they could not exceed half a Pint; and also perceiving the Child did not advance after the Discharge, defired a Man Midwife might be fent for; accordingly one of the most eminent in this Place attended; and having brought one Foot with the greatest Difficulty, attempted to fetch the other; but after feveral fruitless Efforts, either to reach the other Foot, or to turn the Child, the Head being fast jammed against the Brim of the Pelvis, I was then called in; and finding the Child dead, with a very large Head; and the Mother's Pelvis not being of a due Proportion, I opened the Cranjum with my Extractor, and delivered the Patient, who recovered very well, altho' the Child was about twentyfix Inches long, and was very broad over the Shoulders; the Circumference of the Child's Thorax alone being fifteen Inches.

The second Injury that the Mother may receive when the Child is turned; is by crushing the Parts that are betwirt the Child's Head (if too big) and the Bones of the Pelvis, whence Inflammations may enfue; and you acknowledge (d), That the Fibres and

Vessels of the soft Parts in the Pelvis are bruised by the Child's Head, and the Circulation of the Fluids obstructed; so that a violent Instammation, and sometimes a sudden Mortification ensues. And I must observe, that whatever adds to the Bulk of the Head, must crush the Parts yet more; and it is evident, that if the Child be dead, the Head should be lessened, for the Sake of the Mother, as hereaster will be shewn; and in some unhappy Cases the same Operation must be performed, altho the Child be living.

Thirdly, The Mother may suffer when the Head of the Child is so large, that it must be separated from the Body, and remain in the Uterus; but this Danger is not so great as was formerly imagined, as I shall more

fully make appear below.

Sect. 2. The Injuries that may happen to a Child by turning it, may arise from breaking its Limbs,—from compressing the Head too much, and from a Dislocation or Separation of the Vertebræ of the Neck.

The first rarely happens when a skilful Operator is employed, if the Mother lies quietly; and provided it should, the Bones will soon unite again, when pro-

perly fixed.

Secondly, That too great a Compressure upon the Child's Head will occasion Convulsions, and even Death, is what every Person knows to be Fact; and you acknowledge, (e), 'That when the Shape of the 'Head is præternaturally lengthened, the Brain is frequently so much compressed, that violent Convulsions ensue before, or soon after the Delivery, to the Danger, and oft-times the Destruction of the Child.' In another Place you say (f), 'when we leave the Delivery to Nature, perhaps by strong Pressure upon the Head and Brain, the Child is dead when delivered, and the Woman is so exhausted with tedious Labour, that her Life is in imminent Danger.' Again, you say, (g), 'Either the Child died soon after the

Delivery, or recovered with great Difficulty from the long and fevere Compression of the Head, while the Life of the Mother was endangered from the fame Cause as above described.' Afterwards you tell us (b), ' If the Child descends flowly, or after it is low down, flicks for a confiderable Time, the long Preffure on the Brain frequently destroys the Child, if not relieved in Time, by turning or extracting with the Forceps.' And, lastly, (i), When the Face of the Child is come down, and flicks at the Os Externum, if not speedily delivered, the Child is frequenthy lost by the Compression of the Brain. Whence it is very evident, that whatever Method of Delivery either increases the Compressure, or prolongs the Time of it, must be the most prejudicial, and therefore ought to be avoided, if possible. Wherefore the Method, as you tell us, of either placing the Head in its proper Situation, and waiting for the Mother's Efforts to perform the Work, when the Head is too large, or the Pelvis too narrow; as you recommend in one 'Place (k), or, of leaving the Head for some Time to flide gradually down into the Pelvis, when it is too large to be extracted with the Fillet or Forceps, (1), must, I think, be very wrong: But the Head cannot be fo long compressed, when the Child is turned, and extracted by the Feet; as when left to Nature, after placing the Head in its proper Situation for Birth; or of leaving the Head to slide down into the Pelvis, when it is too large to be extracted with the Fillet or Forceps ; which proves that turning the Child must always, cateris paribus, be preferable, because then the Head cannot be so long compressed; and the Injury to the Mother is at the same time less, as appears from Sect. I.

That this may be better understood, it is necessary to enquire into the State or Condition of a Child's Head at the Time of its Birth; what Parts yield most, and on which Part the Compressure will do the greatest

Injury.

<sup>(</sup>b) P. 279. (i) P. 281. (k) P. 280. (1) P. 255.

In my Effay on Midwifery (m) I mentioned, that the lax and pliable Texture of the Parts of the Child's Head, at Birth, greatly contributed to an easy Delivery, because the Bones of the Cramium have little or no Sutures at that Time, but are so thin and soft at the Edges, that they may slip over each other, to lessen the Diameter of the Head in its Passage into and through the Pelvis, to which the Opening at the Fontanel greatly contributes. Hence the Head will be in various Shapes or Forms when the Part that presents comes as in a natural easy Labour, when in a tedious or difficult Labour — when it is squeez'd by the Forceps, and when the Child is turned and extracted by the Feet.

You tell us (n), When the Head is squeezed along with great Force, we find it pressed into a very ob-· long Form, the longest Axis of which extends from the Face to the Vertex. Sometimes indeed this · lengthening is found at a little Diftance from the Vertex, backward or forward, or on each Side, and fometimes (tho' very feldom) the Fontanel or Forehead prefents; in which Case they protuberate, while the Vertex is preffed, and remains quite flat. All these Things shew that the Head is, at this Time, capable of being moulded and pressed into different Shapes. And whoever understands the true Fabric of the Cranium, will find the Os Frontis, and each Os Bregmatis will yield more than the other Bones. For Nature has made the Occiput the strongest Parts, and consequently it yields the least, by which Contrivance the Cerebellum is guarded from being roo much compreffed, or otherwise Convulsions or immediate Death, must enfoe. Hence we see that Providence has so formed the Bones of the Head, that each should give way a little, the better thereby to conform itself to the particular Shape of the Pelvis; and has also made those Bones to yield most, where the Contents of the

Head can be compressed with the greatest Sufety, and those Parts which cannot bear any Compressure without Injury are the strongest defended, as the Occiput yields the least, if at all, and guards the Cerebellum. Hence we find that the Danger to the Child increases, as the Cerebellum is the more compressed; whence it is incumbent upon me, the more fully to explain the the Effects of each Operation as is abovementioned.

When, therefore, the Child's Head is so large as not to enter the Pelvis without the greatest Difficulty (whether the Apex presents regularly with the Child's Face towards the Sacrum, or to one Side of the Pelvis) let the Force of the Mother's Effort, that propells the Child, be ever fo strong or weak, the Cerebellum will, in such Proportion, become pressed; because Action and Re-action are, in this Case, equal; whence it follows, that the more the Head is squeezed, or resisted by the Bones of the Pelvis; the more the Brain, is forced towards the Cerebellum, and confequently, the Mischiess abovementioned will ensue. Hence it is evident, that the more Liberty there is for the Brain to be squeezed from (instead of towards) the Cerebellum, the less this Danger is. This is the State, when the Head prefents, but is too large, or the Pelvis is too strait for the Mother's Efforts alone to accomplish the Birth of the Child.

If therefore, the Head be so much compressed, when the Brim of the Pelvis is so strait, or the Child's Head so large, it must be yet more compressed when the Forceps is used; because, as you direct, the manner of using them in several cases, (0) while the Head is above the Pelvis, the Bulk of the Forceps is between the straitest Part of that Passage and the Child's Head, by which both these Parts are more squeezed, particularly the Child's Head, and as the Forceps chiefly press upon the Back Part of each Os Bregmatis, they must add considerably to the Compressure

against the Cerebellum, which, I observed, was already too great, and as the Surface of the Forceps is narrower than that of the Bones of the Pelvis, and at the fame Time a greater Force is applied, the Injury to the Child will also be increased in the same Proportion. But all these Inconveniences are in a great Meafore avoided, by turning and extracting the Child by the Feet; because, in that Case, the Child's Head is only compressed by the Bones of the Pelvis, and that too in such a Manner, as to do the least Injury to the Cerebellum, for the Preffure then is from the lower Part of the Head, next to the Neck, towards the Os Bregmatis and Os Frontis, both which will yield and give Way; fo that when the Head is foucezed on the Sides, the Cerebrum is pressed towards these Parts, and confequently does less Injury to the Cerebellum than when the Apex comes first; because in the last Case, those Bones are hindred in some Measure from yielding by, the Counterpressure of the Brim of the Pelvis, whence fome Heads will pass whole, when the Child is extracted by the Feet, that would require to be opened if the Apex prefented; or however will pass with more Ease and Safety on all Accounts. And Providence seems to have intended this Method should be taken, whenever great Force was to be used, by making the Bones of the lower Part of the Cranium fo ftrong as to defend the Gerebellum from Injuries, and as the back Part of the Head is largest in most Children, I have frequently, in this Cafe, thrust the Child's Chin upwards, by which the greatest Width of the Skull is thrust into the widest Part of the Pelvis, betwixt the convex Part of the Sacrum and Ilium, whereas, by the Method of pulling out the Chin, as you fometimes direct, the broadest Part of the Head will be rather brought into, than got out of the narrowest Part of the Pelvis.

The next Injury to the Child that may attend the turning and extracting it by the Feet, is a Diflocation or Separation of the Vertebræ of its Neck: But this HEE

s a Gase that can rarely happen to a skilful Operator, except when the Child's Head is so large that it cannot pass whole into the Pelvis; in which Case the Child must die before it can be born, because the Head. must be lessened; so that the only Inconvenience is, that in the first Method, the Child will be put to a little more Pain by separating the Vertebree than it would endure by an Instrument immediately struck into the Cerebellum; for I must here observe, that if the Instrument only penetrates the Cerebrum, the Child may live some Time in Misery, and suffer more than by the Diflocation of its Vertebræ, whereby it would die immediately. And should it so happen, that the Head be found too large to come out whole, after the Body is extracted, the Operator may separate it from the Body with a Knife, and then bring it out with my Extractor, with great Eale to himself, and Safety to the Woman, as I shall make appear in due Time.

§ 3. I shall, in the next Place, shew in what Cases the Child ought to be turned to be extracted by the

Feet.

First, in all Cases, cæteris paribus, where the Child lies crosways in the Womb, or presents any other Part than the Head or Feet, and can be turned with Safety

to the Mother.

on took that I the work happing Secondly, in all Cases, cateris paribus, where the Head presents above the Brim of the Pelvis, or is only a little advanced therein, but in a wrong Polition; except in fuch Cases where the Head only rests or is presfed a little obliquely on the Fore-part or Side of the Pelvis, and at the same Time is small enough to pass eafily with the Mother's Efforts alone. In which Case the Head may be eafily removed from that Part it is preffed against, either by the Finger of the Operator, or by introducing only one Blade of the Forceps, whereby it may be moved farther down, provided the Labour Pains are ffrong . 1 10 at 2 10 10 1 20 10 11

Thirdly, in all Cases, cæteris paribus, where the Mother's Throws are too weak, or where the Child's

Head

Head is to large, as cannot be forced into the Pelvis by the Labour Pains alone, but yet may be extracted by the added Strength of the Operator pulling at the Feet and Shoulders.

Hence it follows, that the Child's Head may justly be said to be too large in two Respects; first, when it is so large as not to be forced into the Pelvis by the sole Power of the Mother; and secondly when it is so large as to require to be opened in order to lessen its Bulk, not being (the compressed like a Sugar Loaf) small enough to pass whole into the Pelvis, and let the Difficulty to the Operator be ever so great, he ought to save the Child if possible, by turning it under the Restrictions above mentioned.

§ 4. This Distinction, § 3. you have omitted to give your Readers (notwithstanding your Clearness and Perspicuity, so much applauded by the Review Writer) as is evident from the following Passage, where you say (p) I own indeed, where the Woman has not Strength nor Pains sufficient to force along the Child, and

the Difficulty does not proceed from a large Head,

or narrow Pelvis, the Method will prove successful; but if, in the other Extreme, I appeal to all candid

Practitioners, whether many Children are not loft,

even when the Head does not present, and when the

· Body is first brought down, because the Fcetus can-

on be delivered in another Manner.

Thi naturally leads me to examine what you can mean by the Word extreme. If you mean by that Expression, that when the Head is too large to enter whole into the Pelvis, the Child ought not to be turned to be extracted by the Feet; you then, indeed, may, in some Measure, be said to be right; but to me his evident this cannot be your Meaning; because you recommend, in such Case, the Use of the Forceps; and therefore the Word Extreme is very improper in this Place; because, if the Head be not so large as to re-

quire being opened, it cannot be said to be in the other Extreme; and if it requires to be opened, the Forceps is an improper Instrument for such a Purpose, other Methods being much faser and more expeditious; and if, in that Case, made use of, must injure the Woman greatly.

In the next Place, 'you appeal to all candid Practitioners, whether many Children are not lost; even when the Head does not present; and when the

Body is first brought down, because the Fcetus can-

not be delivered in another Manner. 10 100 of the

As a Practitioner (and I hope a candid one) I must declare, that in twenty two year's Time I never met with any Instance, except one in December last (1951) supposing the Child to be living, when it was, or could be loft, by bringing the Feet foremost; and I have delivered many Women of living Children, whose Heads have been from 14 to 18 or 19 Inches in Circumference: fome of whom had employ'd other Men Midwives, just before I was called in ; but, nevertheless, would not permit 'em touse any Instruments, altho' the Men had declared it was impossible to extract the Child without; because they said the Head was too large: and particularly one Case, where a Pupil of yours (an eminent Surgeon) was concerned. And I do declare it, as my fincere Belief, that no Child can be properly faid to be loft by bringing by the Feet, that can be faved by any other Method, when under judicious Hands.

The abovementioned Case, where the Child, if alive, might have suffered, happened in this City of York. The Patient being pregnant of her tenth Child had gone nine Weeks above her Calculation (which, for particular Reasons, there was no Occasion to dispute the Truth of it) and the Child's Bulk, when born, seemed like one of full that Age, after its regular Birth. Upon touching the Woman, I found the Uterus misplaced, and that I could only feel that Side of the Os Uteri, which was next to the Os Pubis, the other being high

up, the Child's Head at the fame Time preffed Part of the Mouth of the Womb and Part of the Vagina. fo low down in the Pelvis, forwards, that it interrupted a free Paffage to the Child's Head, and hung down like a loofe Bag: I turn'd the Child, and got both Feet out with Ease; but found no small Difficulty in getting the Breast and Shoulders to pass the Brim of the Pelvis; but that being accomplished, and those Parts having passed the Os Externum, the Head fluck at the Brim of the Pelvis, altho' I turned the Chin to one Side of that Opening, and tried to make it advance. fometimes with a Finger in the Child's Mouth, and formetimes by pushing up the Chin, to get the broadest part of the Cranium to one Side of the Pelvis, at the fame time pulling at the Shoulders with no small Force, but all in vain. This Method I repeated two or three times with no better Success, wherefore I exerted my utmost Strength, when I found the Vertebræ of the Neck began to separate from those of the Back; and by continuing the same means, the Head and Body were foon parted: I then introduced my Left Hand into the Uterus, turned the Apex of the Head towards the Mouth of the Womb, and introduced my Extractor, and immediately extracted the Head in the Manner I have directed in my Essay on Midwifery The Head was exceeding large, much offified, and with only a small Opening at the Fontanelle. The Woman recovered as well this Time as ever she did of any of her other nine Children, without the least Inflammation in the Parts betwixt the Child's Head and Bones of the Pelvis, which was very strait, and had always occasioned a tedious and difficult Labour of all her other Children, several of whom died convulsed foon after their Birth, or in a few Days.

A certain Person who was present at the Labour run out of the Chamber frightned at the Consequences, when she found the Head of the Child lest in the Womb; having before been present at two Labours, where the Head was lest in the same Condition; and althor

although a Man-Midwife was sent for to each Woman, yet neither of 'em could extract the Head thus feparated, and both the Women died: But this good Woman's Fears were foon over, when one, who attended the Operation, went and affired her, that the Patient was fafely delivered both of the Head and After-Birth.

I must here observe, First, That had a Person attempted to deliver this Woman by opening the Head, with the Scissars, as you direct, the Woman must have fuffered greatly, and perhaps have loft her

Life.

Secondly, That the Confequences of leaving the Child's Head alone in the Uterus, are not so bad as was formerly apprehended, fince it may foon be brought out by my Extractor: Whence it is evident, that in some Cases, hereafter to be mentioned, the taking off the Head, when the Body comes first, may be the fafest and easiest Expedient for Delivery.

Thirdly, That as there was no hard Substance immediately pressing against the Parts betwixt the Child's Head and the Bones of the Pelvis, those Parts could not be so much crushed, both on Account of the Softness of the Integuments of the Child's Cranium; and as the Bones of the Head would conform to the Shape of the Pelvis; and because the whole Pressure was not confined to a narrow Surface, but each Part

bore its Share. But to return,

Sect. 5. From what has been faid in the Third and Fourth preceeding Sections, it is evident, that if the Child's Head be so large, as not to be extracted whole, it must be first opened to let out Part of its Contents, whether the Feet or Head presents; and this must be the Meaning of your Words, other extreme. But yet, in another Place you fay (q) If the " Head is large, or the Pelvis narrow, the Child is · seldom faved, either by turning, or using the Forceps, until the Head shall be farther advanced. Had you not told us (r), ' That your Treatife was Six

(9) P. 291. (r) Pref P. 4.

Tears in cooking up; and that you have since revised and corrected it, I should have imagined, that this last Paragraph had inadvertently crept into it. For if the Head he so large, or the Pelvis so narrow, that the Child is seldom saved, either by turning, or using the Forceps, how is it possible for the Head to advance by the Mother's Efforts alone; when, according to you, it could not be saved, by the added Strength of the Operator? especially as you have argued all along, that the intended Use of the Forceps was like a Pair of Hands to add Force to the Mother's Efforts.

In another Place you say (s), ' If the Head is detained above the Brim of the Pelvis, or a small Portion of it, only farther advanced, and it appears, that the one being too narrow, or the other too large, the Woman cannot be delivered by the strongest Labour-Pains, in that Case, the Child cannot be faved, either by turning, or bringing it by the Feet, or delivered by the Application of Fillet or Forceps; but the Operator must unavoidably use the difagreeable Method of extracting it with the Crochet. Nevertheless, in all these Cases, the Forceps ought first to be tried, and sometimes they will fucceed beyond Expectation, provided the Birth is retarded by the Weakness of the Woman, and the fecond, third, fixth or feventh Obstructions; but they cannot be depended upon, even when the Vertex presents, with the Forehead to the Side, or back Part of the Pelvis, and (though the Woman has had frong Pains for many Hours after the Membranes are broke, the Head is not forced down into the Pelvis, or at least, but an inconsiderable Part of it, refembling the small End of a Sugar-Loaf. For from these Circumstances you may conclude, that the largest Part of it is still above the Brim; and that the Head is too large, or the Pelvis too ' narrow. Even in these Cases, indeed, the last Fillet, or a long Pair of Forceps may take fuch firm Hold, that with great Force, and the strong Purchase, the

Head will be delivered; but fuch Violence is com-

fammation, and perhaps Laceration of the Parts.

s as is attended with a Mornification.'

I must observe, that only two Pages before (t) you told us, The Head will in Time flide gradually down into the Pelvis, even when it is the targe to be extracted with the Fillet or Forceps !' And in the abovementioned Paragraph, you fay, when the Head is too large; (the same Expression as before) the Child cannot be delivered by the strongest Labour Pains, nor be laved, either by turning or bringing by The Feets or with the Fillet or Forceps, without the Crochet; and yet you order the Forceps to be first fried: And then, after that; you tell us, they cannot be depended upon; but nevertheless, the Fillet or great Forceps may take such firm bold, that with great Force and from Purchase, the Head will be delivered: And in another Place you fay (u), 'We ought always to replace the Head where the Face prefents, more especially, " when the Pelvis is too narrow, or the Head too large."

You told us also, that when the Fillet, or great Forceps were used, as mentioned, 'Such Violence is commonly fatal to the Woman, by causing fuch an Inflammation and perhaps Laceration of the Parts. as is attended with a Mortification.' But I must observe, that, as you have stated the Case, every Thing is supposed to be prepared, by Nature. for the Birth ; but that the Straitness or Narrowness of the Pelvis, or the Largeness of the Child's Head, are all the Obstacles to an easy Delivery: Here then, are no Parts to be lacerated, except the Os Uteri, which is supposed to be wide enough, because you have not made that as an Obstruction to Delivery. And it is evident, that the Parts of the Woman, betwixt the Child's Head, and the Bones of the Pelvis, are not fo subject to Inflammations, as the Os Externum: Moreover, if the Head has passed into the Pelvis, which is the narrowest Part, no skilful Operator will,

pull with fuch Violence, as you feem to hint, because the Case does not require it; especially, as the Os Externum, will easily expand, while the Brim of the Pelvis remains of the same Width: And you have told us (w), 'That when the Head has passed the Brim of the Pelvis, it is seldom restrained in the lower Part, unless the Patient is weak; which shews, that there cannot be so much Danger of Laceration, as you would infinuate.

You say, in all these Cases, the Forceps ought first to be tried, provided the Birth is retarded by the 2d, 3d, 6th or 7th Obstructions: The 3d Obstruction, you say, P. 243, arises 'from the Rigidity of the Os 'Uteri, Vaginæ, and external Parts; which may be owing to the Age of the Patient, to large Callosities; or to Glands and Schirrous Tumors, that

block up the Vaginæ,

In all which Cases a prudent Person would never use the Forceps at all; because that Instrument cannot soften either the Rigidity, or Callosity of the Os Uteri, nor remove the Schirrous Glands and Tumors; but on the contrary, instead of lessening, will add to the Bulk and Hardness of the Child's Head.

If the Child's Head be so large as not to pass into the Pelvis, by the sole Efforts of the Mother; we are to consider two Things: First, whether the Head of the Child alone can injure the Mother, more than when there is an additional Bulk made to it; and that too, perhaps, with a Surface not very proper for sliding without much Friction.

Secondly, Whether the Child's Head be more compressed by the Parts of the Mother, in passing into the Pelvis, with or without any additional Bulk.

In order to determine these Things; it is incumbent upon me now to inquire into the various Methods heretofore or now used, to bring the Head of the Child whole into the Pelvis; and to shew the Dangers or Inconveniencies, which attend each

Operation.

RIGE

Sect. 6. In all Cases, when the Child's Head presents properly, and cannot be forced into the Pelvis by the sole Efforts of the Mother, and yet is not so large, but it may be extracted whole: The Method used to make it advance, was either by ap-

plying the Fillet or Forceps.

The Fillet is a Noose, made at the End of a Ribband, Garter, Inkle or the like; which being conveyed on the End of the Fingers, and slipped over the Fore and Hind-Head; or else is made in Form of a Sheath, in which is a Piece of slender Whalebone, about a Foot and half, or two Feet in Length. Vid. Tab. Fig. 1. One Hand being introduced along the Side of the Child's Head, the doubled Part of the Whalebone, is to be introduced along the Hand already in the Womb, betwixt it and the Side of the Child's Head; when one Side of the Fillet may be pushed over the Face, by the Thumb; while the other, is put on the opposite Part by the little Finger; where the Fillet must be kept, until the Whalebone be withdrawn: This being done, the Operator must pull that End of the Fillet [b], which runs through the Ring [c], that is fixed on the opposite Side, by which Means, the Noofe is lessened, and more closely surrounds the Neck of the Child. And when the Operator thinks he has sufficient Hold of the Child; let him pull at the Fillet, with one Hand, while with the other, that is within the Vagina, he guides the Head into the Center of the Passage, in the most commodious Manner.

I find you advise(x) the Operator to tie the Ends of the Fillet together, after the Whalebone is withdrawn, by which Means the Noose will be so large, as easily to slip from off the Head, which it cannot so easily do, by the Improvement I have made; because it may be drawn to what Degree of Closeness the Operator shall think proper, of which he may judge by the Fingers that are already in the Womb, so that it may be tight enough to take hold of the Chin and Back-part of the Child's Head; but yet not so tight about the Neck as to hinder the Return of the Blood to the Heart; and if the Operator should find the Fillet to be too tight, at any time he can slacken it, or take it quite off by only pulling at that End or Side of the Fillet, to which the Ring is fixed. Fig. I. Let. A.

You tell us (y), 'That the Disadvantage attending all Fillets, is the Dissiculty in introducing and fix-

ing them; and the this last is easier applied than the the others, yet when the Vertex presents, the Child's

Chin is fo pressed to the Breast, that it is often impracticable to infinuate the Fillet between them;

and if it be fixed on the Face and Hind head, it frequently flips off in pulling: but granting it com-

modiously fixed, if we are obliged to pull with

great Force, it will gall, and even cut the soft Parts to the Bone. Thus far I agree with you, excepting in the last Part; for if the Fillet cut the soft Parts to the Bone, it must be owing either to the Ignorance of the Operator in chusing the Fillet, or in applying it in improper Cases; for the chief Intent of this Instrument is to add only a moderate Assistance to the Monther's Efforts, and ought never to be used when very great Force is requisite; notwithstanding that you just above have told us, that even in these Cases the last Fillet may take such a firm Hold, that with great Force and strong Purchase, the Head will be delivered.

You then proceed to tell us (2), 'That if the Child comes out of a fudden, in confequence of violent pulling, the external Parts of the Woman are in great Danger of fudden Laceration.' But I must observe, that this is not the Fault of the Fillet; for by the same Indiscretion the like will happen, when your

favourite Instrument, the Forceps, is used in the same manner, because as soon as the Head has passed into the Pelvis, it has gone through the narrowest Passage, which will not give way, and where the greatest Force is requisite; whereas less Force is necessary afterwards, and that too must be increased only by Gradation, because the Os Externum will yield.

You then go on: 'But if the Head is small, and comes along with a moderate Force, the Child may be delivered by this Contrivance (by the Fillet) without any bad Consequence: tho' in this Case (viz. when the Head is small) we find by Experience, that unless the Woman has some very dangerous Symptom, the Head will in time, slide gradually down into the Pelvis, even when it is too large to be extracted by the Fillet or Forceps, and the Child be safely delivered by the Labour-Pains.' If you mean, by the last mentioned Part of this Paragraph, that this should be an Encouragement for Accoucheurs to wait and let the Head remain squeezed for so long a Time; then your Advice must be injurious, because the Dangers mentioned in Sect. 2. Numb. 2. may ensue, which

This whole Paragraph is copied from your new Edition, which you tell us you revised and corrected; and fure I am, I never met with so much Inaccuracy and Contradiction in one Period, in any Author, either ancient or modern, althor the Review Writer informs us,

your Instructions are fo clear and perspicuous.

Sect. 7. I come in the next Place to enquire into the Advantages and Dangers attending the Use of the Forceps; but in order to do you all the Justice I can, I shall first give your Declaration as to using Instruments at all.

You say, (a), It is not to be denied, that Mischief has been done by Instruments in the Hands of the Unskilful and Unwary; but I am perswaded,

ought to be avoided.

<sup>(</sup>a) P. 241.

that every judicious Practitioner will do every

Thing for the Safety of his Patients before he has Re-

Instrument; though Cases will occur in which gentle

Methods will absolutely fail—For my own Part I always avoided them (Instruments) as far as I thought

confistent with the Safety of my Patients, and strong-

ly inculcated the fame Maxim upon those who have submitted to my Instructions. In another Place

(b), 'The Reader ought not to imagine, that I am more bigotted to any one Contrivance than to another.'

That all Kinds of Instruments ought to be avoided, if possible, is certainly right; and I may add, that that Instrument which is the least pernicious ought always, cæteris paribus, to be preferred to any other.

Notwithstanding this Declaration, I believe it will appear, that you are so far from avoiding the Use of Instruments, that you direct the Use of the Forceps (c), or to turn the Child, as an indifferent Thing, which ever Method is followed; whereas the Forceps ought never be made use of, when the Child can be turned, and extracted by the Feet, as is evident from what has been said, from Sect. 1st. 2d, and 3d; and should it appear that you frequently use one particular Instrument, in many Cases, where the Delivery may be performed without any; or even in Cases where other Sorts are less dangerous; then I fancy the Reader will be convinced, that you are bigotted to some contrivance more than another.

Sect. 8. One Sort of Forceps we find mentioned by Hippocrates (d), but we don't read of any so contrived as to preserve the Life of the Child, till Avicenna told us (e), that habent Obstetrices quædam Tenacula quibus circumligant pannos ne lædant vel ossendant Fœtum,

<sup>(</sup>b) 256. (c) P. 257. (d) P. 618. (c) Mercurialis in Spachius, p. 236.

isfque educant : Of the first fort, I fancy, may be those Drawings in Albucasis, in Spachius (f); which with some other ancient Instruments I have ordered to be engraved in the annexed Copper-plate, may be feen,

I in Fig. 12 and 3.01 - Het villoubilds How and anger has I own I do not imagine the Instrument hinted at was any kind of Forceps that would preferve the Child, because Avicenna does not mention it as a Secret that he had, but speaks of it as a Thing well known; for he fays, Habent Obstetrices quædam Tenacula, &c. and if it was such a Sort of Forceps, and so well known, it is furprifing to me, that the other Sorts of Forceps should have been in use for so many Ages after his Time, and that no Mention should be made of this Sort by any Author; for according to your hittorical Account, such an Instrument never was fince supposed to be known by any Person till the last Century. when you fay (g) Chamberlayn used it: But had you read Rueff in Spachius, you might have feen a Drawing of a Pair of Forceps (altho' not so well adapted to the Head as some more modern Sorts) which were used in the preceding Century to preserve the Child. They are not indeed fo curved as ours, but feem adapted for the fame Purpose (b), as appears in the annexed Plate, manfig. 14. Juny to waterleaded to the first with the first are

Youtell us (i), when you are about to use the Forceps, the Bed is at a great Distance from the Fire, the Weather cold, and the Woman of a delicate Constitution, a chafing Dish with Charcoal, or a · Vessel with warm Water, should be placed near or under the Bed, lest the Woman should catch Cold.'

In the first Place, if a chafing Dish of burning Charcoal (which is what, I suppose, you mean) be placed near or under the Bed, so as to warm the adjacent Parts, every Person near it would soon be suffocated; and the more delicate the Patient's Constitution is, the fooner will the fuffer : And,

<sup>(</sup>f) P. 446. (g) P. 58. (b) Rueff in Spachius, Lib. iii. p. 179. (i) P. 266.

Secondly, If a Veffel with warm Water be placed as directed, the very Steam, altho' warm as it rifes, will vet foon be fo cold as to endanger the Life of the Patient, by the damping the Cloaths, &c. about her, and no prudent Person would advise a Lying in Woman to be in the Condition, and Circumstance you have here placed your Patient. Is this Method of Practice, then, fo unexceptionable as the Review Writer, Number III. informs us?

In the next Place you direct the Operator to place himself upon a low Chair, and having lubricated with

Pomarum the Blades of the Forceps, and also his

right Hand and Fingers, flide first the Hand gently

into the Vaginæ, pushing it along in a flatten'd Form, between that and the Child's Head, until the Fin-

gers have passed the Os Internum; then with the other

. Hand, let him take one of the Blades of the For-

ceps, and introduce it betwixt his right Hand and the

· Head' (having its concave Surface rowards the Child's Head, you should have added), ' if the Point or Ex-

tremity of it, should stick at the Ear, let it be slipt

backward a little, and then guided forwards with a

· flow and delicate Motion; when it shall have placed

the Os Uteri, let it be advanced still farther up, un-

til the reft at which the Blades lock into each other be

colose to the lower Part of the Head, or at least with-

in an Inch thereof.' This is the fecond Operation.

You then proceed, in the third Place, and fay,

Having in this Manner introduced one Blade, let him withdraw his right Hand, and infinuate his left in the

' same Direction along the other Side of the Head,

" until his Fingers shall have passed the Os Internum."

But you have not given Directions to hold the Handle of the first Side of the Forceps in its Place, while the other Side is introduced.

Thankin the fourth Place you fay, The Operator s taking the other Blade with the Hand that is difene gaged, let it be applied to the other Side of the Child's Child's Head, by the Means employed in introducing the first ? Then, fifthly, the left Hand must be withdrawn, and the Head being embraced between the Blades; and, laftly, Let them be locked in each other, and the Handles firmly fastened together, with a Fillet or Garter. This is the Method which you direct when the Head is within the Pelvis, and is the same that all other Operators take upon this Sort of Forceps in the like Cafe, except that they commonly lock the Blades together, before the Hand is withdrawn, lest any Part of the Woman should be crushed betwixt the Blades, which may happen in many Cases, especially as you order 'the Rests, at which the Blades lock into each other, to be close to the lower. Part of the Head, or at least within an Inch thereof; which is a very necessary Precaution to be given to your Readers, especially as you direct them to use the Forceps when the Head is above the Pelvis; in which Case the Precaution is yet more necessary, as you direct in another Place.

Sect. 9. The Dangers that attend the Use of the Forceps may affect either the Mother or the Child. The first may be bruised by a Compressure of the Parts betwixt the Forceps and the Bones of the Pelvis; which will do the greater Injury, cæteris paribus, the narrower the Surface of the compressing Body is, and it makes the Compressure greater, by adding to the Bulk of the Child's Head; which it may do in two Respects, as I shall shew presently.

The next Injury it may do the Mother, is by extending the external Parts more than the Size of the Child's Head may require, which, as it adds to the Bulk of the Head, it must unavoidably do, and thereby may lacerate them; especially in unexperienced, unwary, or unskilful Hands; and this they are more liable to do as you now have them made; first, because, as I shewed in my Essay on Midwifery (k), the Parts of all Women are not of the same Dimensions,

and the Children also vary in the Bulk of the Head! and Thickness of the Neck; yet these Instruments, being of a particular Size, cannot be made to yield, and must therefore be so large, in respect to the Make of some Women, that a Laceration of the Perinaeum may ensue. This may be demonstrated as plainly as any Proposition in Euclid: For as you have your Forceps made, the Ends which you place near the Child's Ear, will meet, or nearly fo, if no intervening Body hinder them; and as each Blade may be faid to be a Curve nearly elliptical, it is evident, that when these Ends are used, they must be extended at least two Inches, or more; and then it is as evident, that the Middle of the Bow-Part of the Blade must likewise be extended in Proportion; whence it is plain, that that Extension might be avoided, by making those Ends to approach nearer than two Inches; which will have fufficient Purchase, and yet not injure the Child, by squeezing and bruising the Parts so much.

It is likewise as evident, that the rougher the Surface of the Forceps is, cæteris paribus, the greater must be the Friction, and consequently the greater Force must be requisite to extract the Child, as by the Laws of Mechanics can be demonstrated; whence the Mucus of the Parts of the Woman must be abraded. which will inflame them the more. Hence it follows. that Leather wrapped round the Forceps, altho' well oiled or lubricated with Pomatum, will do greater Injury than polished Steel, with the same Advantage, and wrap the Leather spirally, as carefully, and as smoothly as possible round the Curviture of the Blade; yet one Part will rife higher than the other in a very little Time, if not at the very first; and it is evident also, that the Leather in this Case, when once wer, will never be fo fort and smooth as at first; and I may add, that the Blood and Waters fucked up by the Leather, or that gets betwixt it and the Steel-work, will corrupt and ftink; and in some Cases, perhaps, . Year (a) Politcipe, Sed. 6. p 284. may convey Infection; to avoid which you say (1), the Blades of the Forceps ought to be new covered with Stripes of washed Leather, after they have been used; so that every Operator must learn the Art of covering the Forceps to Perfection, because an Artist is not to be found in all Places.

Sect. 10. The Dangers to the Child from the Forceps are owing to the Compressure, by squeezing the Head more than the Parts of the Mother would do; whence the Mischiess related in Sect. 2, Numb. 2, may ensue, and therefore, if possible, ought to be avoided; and as the Surface of the Forceps is so much narrower than the Surface of the Parts of the Pelvis, the Head must not only be more squeezed than without the Forceps, but also be in greater Danger of Instammations, &c. as well as the Evils above-mentioned.

Sect. 11. Having now given an Account of the Use of your Forceps, I refer the Reader to a Description of that Sort I make use of in my Essay (m); and by comparing the Advantages and Inconveniencies of each, may judge for himself, which he thinks the more useful, and less prejudicial to the Woman or Child.

Supposing the Head of the Child to be in the Pelvis, I introduce the left Hand along the Side of the Child's Head, and with the other introduce my Forceps with the Ends, betwixt the Inside of my Hand and the Child's Head, with the great Skrew towards the left Hand, which the elliptical or oblong Form of the Pelvis, will easily permit me to do; so that one Wing will be towards the Pubis, and the other towards the Perinæum, agreeable to the Shape of the Os Externum; when the Ends have reached the Ear or Neck of the Child; I then with my right Hand gently expand the Wings, or open the Forceps by pushing with the Palm of my right Hand against the Handle, which is done without moving any other Part of the Machine; and then finding the Ear or Side of the

<sup>(7</sup> P. 291. (m) Postscript, Sect. 6. p. 384.

Child's Head, I guide one Wing to be placed on one Side betwixt the Pubes and Head, or betwixt the Sacrum and Head, as I find the most commodious, and then I place the Forceps right, by gently turning it with the Handle, while the Fingers of the left Hand place the End of the Wing against the Neck of the Child, below the Ear, when of course the other must be parallel to it always, taking care that nothing is betwixt the Child's Head and Forceps; then with my right Hand I draw the Wings, till I have fufficiently fourezed the Child's Head fo as not to injure it; which being done, by pulling the Handle, and thrusting at the great Skrew, while the left Hand holds the Instrument fast, I can judge pretty well, by my Fingers that guide the Wings in the Pelvis, how far the Head may be squeezed with Safety. This done, I fix the great Skrew with my right Thumb, which holds the Instrument, fo that pulling as strongly as I will, the Head can be no more squeezed thereby, neither can the Instrument fo eafily flip: I then withdraw my left Hand, and therewith affift my right in extracting the Head and when fufficiently advanced, I loofen the Skrew with my right Thumb, and take away the Forceps.

From what has been faid in Sect. 8, 9, 10, 11, it is evident. I think, that my Forceps is as good, if not better, than any yet continued: First, because the Instrument may be introduced at once, after the Fingers or Hand is within the Vaginæ; whereas with the other Forceps the Hand must be twice introduced at the least, and each Side of the Forceps must be introduced separately; so that the whole Operation, thus far, is double the Pain and Trouble to mine. Secondly, as the Wings are within the Pelvis, they can be expanded more or less, without putting the Mother to any Pain. Thirdly, the Hand or Fingers that are within the Vaging, will not only move less than when employed in fixing the other Sort of Forceps, but also will do it in less Time; both which must occasion less Uneafiness to the

the Woman. Fourthly, as the Joints of these Forceps are within the Pelvis, the Wings will be applied fo as to fit any Child's Head; wherefore the Parts of the Woman will be less extended than with old Sorts of Forceps: And fifthly and lastly, this Instrument is less prejudical to the Child's Head, because the Wings can be so fixed, at any determinate Degree of Expansion, as not to compress the Head more than necessary. whereby the Injuries mentioned in Sect. 2; must be in a great measure avoided; whereas with the other Forceps, the more you pull, the more you squeeze the Child's Head.

The chief Objection that ever I heard against my Forceps, was the Difficulty of introducing it on account of its Bulk, which furely will appear no Difficulty at all, because its Diameter is only three Inches; and if the Distance from the Pubes will not admit of a flat Body of that Diameter betwixt it and the Coccyx, or Perinæum, how will it permit a Child's Head of perhaps twelve or fifteen Inches in Circumference to pals? And therefore if there be not a Passage for the first. the last cannot come out whole, without tearing its Way. The Inconveniencies either of this or the other Forceps will be more apparent, as we mention the particular Cases, where Forceps ought to be used at all. which is the next Point to be settled.

Sect. 12. You tell us (n), When the Head is advanced into the Pelvis (altho' in a natural Direction, you might have added) and there sticks fast for a confiderable Time, and cannot be delivered by the Labour-Pains, the Forceps may be introduced with great Ease and Safety, like a Pair of artificial Hands; but I must observe, first, that the Head cannot stick, when it is advanced into the Pelvis, unless at the Os Externum, because in a natural made Pelvis the Brim is the straitest Part. And,

Secondly, That when the Head is advanced into the

Pelvis, the stopping of the Child is owing either to the Contraction of the Os Uteri round the Neck and Shoulders of the Child, to the Navel ftring being twifted around the Child's Neck, to the Shoulders being misplaced, or to the Bulk of the Breast and Shoulders! 500 500 8500

In the first Case, the Blunt-Hook being applied under one Axilla, betwixt an Arm of the Child and its Breaft, will rarely fail of making the Child advance through the Os Uteri, and then Nature may do the reft. In the fecond Cafe, by cutting or breaking the Umbilical Chord, the Child will advance. In the next Place, if the Shoulders stick either upon the Sacrum or Os Pubis, the Forceps ought not to be used, because the Child may be safely replaced by the Operator's Fingers; and laftly, the Blunt-Hook applied as above, will bring those Parts into the Pelvis much fafer than the Forceps, because the Child is thereby less injured; and there can no Danger happen to the Mother; for as foon as the Shoulders are advanced, the Hook must be withdrawn before the Bulk of the Child's Head be advanced to fill the Os Externum. This Method, in such a Case, will very rarely fail, and ought therefore to be attempted first, because the Dangers to the Mother, as mentioned in Sect. 9, and those to the Child, from compressing its Head too much, may all be avoided.

Sect. 14. In the next Place you fay (f), " When

the Head prefents, but remains very high, the Forehead being at or above the upper Part of the

Sacrum; and on account of the Narrowness of the

' Pelvis at that Part, cannot be brought along at the

first or second Effort, let the Operator turn the Fore-

head a little to one Side; but if it is so fixed in the · Pelvis, as not to be moved in that Manner, let him

try to push the Head above the Brim with the For-

s ceps, and then turn it to one Side, in order to profit

by the Width of the Basin, which in this Place is

commonly about an Inch greater from Side to Side

than from the fore to the Back-part.

If the Pelvis be for narrow as you here represent it. the Addition of the Bulk of the Forceps must yet increase the Danger to the Woman, not only by bruising the Parts betwixt them and the Bones of the Pelvis, but also may lacerate them, because as their Blades are covered with Leather, altho' well oiled, they will yet not flip fo easily as polished Steel. In the next Place the Child's Head must likewise for the same Reason be more compressed in the same Proportion; whence Convolfions, if not immediate Death, may enfue. I should think it more prudent to try first to turn the Child's Forehead to one Side of the Pelvis; and then if the Pains be strong, wait a little Time, to see if there be any Probability of the Head's advancing as it ought or (which is much preferable) endeavour to turn the Child, and bring it by the Feet; whence there will be no Addition to the Child's Head to injure the Mother, nor yet to crush the Brain, so much as by your Method. And this may be easily done, because you suppose that the Head may be pushed up, and turned to one Side after it has been fixed in the Pelvis; and in that Cafe, if that can be accomplished by the Forceps, as you direct, it is much easier done by the Hand alone; and then at the same time the Operator might bring it by the Feet, whereby, cateris paribus, less Injury will be done to both Mother and Child; whence it follows, that notwithstanding your Declaration mentioned in Sect. 7, you direct the Use of an Instrument, when (as you have stated the Case) the Woman, by an able Operator, might be delivered without any fuch Aid

Sect. 15. You then proceed (g), ... When the Head

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and a

is some low down, and cannot be brought farther, because one of the Shoulders rests above the Os

Pubis, and the other upon the upper Part of the Sa-

crum, let the Head be frongly grasped with the For-

ceps, and pushed up as far as possible, moving from Blade to Blade, as you push up, that the Shoulders may be more easily moved to the Sides of the Pelvis, by turning the Face or Forehead a little towards one of them; then the Forehead must be brought back again into the Hollow of the Sacrum, and another Effort made to deliver.

If this Method fail, you then proceed to a second Operation, and order the Head to be pushed up again, and turned to the other Side, because it is uncertain which of the Shoulders rests on the Pubes or Sacrum: Suppose, for Example, the right Shoulder of the Child sticks above the Os Pubis, the Forehead being in the Hollow of the Sacrum; in this Cafe, if if the Forehead be turned to the Right-hand Side of the Woman, the Shoulder will not move; whereas if it be turned to the left, and the Head at the fame time pushed a little pwards, so as to raise and disengage the Parts that are fixed, the right Shoulder being towards the Right-hand-fide, and the other to the Left-fide of the Brim of the Pelvis, when the Forehead is turned again into the Hollow of the Sacrum, the Obstacle will be removed, and the Head be more easily delivered.

I must here remark again, that you recommend a Method dangerous to the Mother, and in all Probability fatal to the Child; altho' you should obtain a Delivery, when a safer Method can be followed without Instruments.

For first, if the Head be in the Pelvis, as you suppose, and only the Shoulders are placed as described above, then the easiest and safest Method is to introduce the Hand slatways into the Pelvis, along-side of the Child's Head, where there is sufficient Room; and then the Operator with his Fingers may easily place the Shoulders right; and the more so, if they can be raised up by the Method you advise; because the Sacrum is the highest and most convex Part of the Pelvis so that a very little Motion, even upon a Level,

will foon force the Shoulder from off that Part; whence this Operation may be performed at once, as I have frequently done without any Instrument, while the Method with an Instrument may require two Operations at least, if practicable at all.

Secondly, if the Head must be strongly grasped by the Forceps, as you order, it may prove fatal to the Child; by so strongly compressing the Brain, as has

been already taken notice of; and,

Thirdly, I much question your Method can avail in a Woman, altho I own I have never tried it, having always succeeded by the above Means, as all I am acquainted with have informed me they have done.

I think your Method will not succeed; for altho (in the Cafe stated) you should turn the Head of the Child almost quite round, yet that will not move the Shoulders, even when you thrust upwards; by which indeed you may thrust the Head nearer to the Shoulders, but I dare fay you cannot thereby move them, especially without injuring the Child's Head, because, as the Uterus contracts and preffes forwards, where ever any Part of the Child sticks, it will be in such Proportion fixed against the Part that obstructs it: And this in feveral Parts of your Book you take notice of; particularly you tell us (b), the Chin of the Child is fo pressed to the Breast, that it is often impracticable to infinuate the Fillet between them.' Now, if the Difficulty of moving either the Child's Head any Way, or its Body upwards, so little a Way as to infinuate the Whalebone, on which the Fillet is put, how is it probable, that by the Means you mention the Shoulders thould be moved up, and turned into their proper Place? Upon a Machine you may do fuch a Thing, but for many Reasons it cannot be effected on an human Body in Labour; the Difference betwixt these two being very great.

In one Place, Page 312, you tell us, That when the Feet come foremost, and the Child is advanced, the Head does not move round equal with the Body; and therefore the last must be brought one Quarter farther than the Place at which the Head is to be fixed: But when the Body is above the Pelvis, and the Head is advanced, if the Shoulders are wrong placed, then you order the Operator to turn the Head a little towards one of the Shoulders, by which it may be removed; but if the Head, which is not compressed by the Uterus, cannot be turned equally with the Body, how can you expect that the Body should be moved, by only turning the Head a little to one Shoulder, when the Womb is strongly contracted about at, and presses it against the Brim of the Pelvis? Upon a Machine this indeed may be done, but not on a Fatus.

For the same Reasons assigned in Sect. 14, and this Section, the Forceps ought not to be used as you direct (i) in the third Case, mentioned by you, because the Head cannot be pushed up when above the Pelvis, unless the Body moves too; in which case the Child might be turned, and brought by the Feet.

I cannot help taking notice here, that when you meet with a Difficulty in making use of your favourite Instrument, you seem inclined to run any Length, rather than not have it; and therefore you are obliged to have the Woman laid on one Side (which on all Occasions in general is the best Posture, for the Reafons. I have given at large in my Esfay on Midwifery d), altho', for the fake of differing from others, you in general order her to be laid on her Back) and to make your Forceps of Use, you'll make the Bones (of the Pelvis, I suppose you mean, altho' you have not told us, whether you mean them, or those of the Child's Head) to yield a little; which I absolutely deny can happen for feveral Reasons, too many here to be inferted; and because I have feen several opened, not only such as have died undelivered, after having had greater Stress upon the Bones, than if she had been delivered in a natural Delay; but I have likewise feen those opened who have died after a very hard Labour, when a large headed Child has been born; yet after the nicest Scrutiny, we could never find the least Separation of the Bones, or any Thing like it. The fame has been done by others, who yet could never perceive any Signs of it.

Now, let us see how you proceed, 'you suppose the Patient to lie on the lest Side, and the Forehead of the Child turned to the same Side of the Pelvis, let the Fingers of the Operator's right Hand be introduced along the Ear, between the Head and the Os Pubis, until they pass the Os Internum: If the Head is so unmoveably fixed in the Pelvis, that there is no Passage between them, let his lest Hand be pushed between the Sacrum and the Child's Head, which being raised as high as possible, above the Brim of the Pelvis, he will have Room sufficient for his Fingers and Forceps.' Then the next Operation is 'to slide up one of the Blades with the right Hand.' The

<sup>(1)</sup> P. 104, Sect. 2.

third is co withdraw the left Hand, with which he may hold the Handle of the Blade already intro-

duced, while, in the fourth Place, he infinuates the · Fingers of his right Hand at the Os Pubis, as be-

fore directed, and pulhes up the other Blade, &c.

· Esc. And towards the Conclusion of this Operation if the Head, you fay, will not eafily come

along, let the Woman be turned on her Back; after

the Forceps have been fixed, Gc.

In the last Paragraph you have supposed there was no Room to infinuate the Fingers between, the Ear and Os Publs without the yielding of the Bones, which will scarce be allowed you.

Secondly, in this Paragraph you lay it down, that the Head is so immoveably fixed in the Pelvis, that

there is no Passage between them; how must then the

Operator's left Hand be pushed up between the Sacrum and the Child's Head? Or how can it be raifed

high above the Pelvis?" For my own Part, had I not known your Country, I should from this, and some other Parts of your Book, imagined you to have come

rather West than North of England.

And, Thirdly, I must remark, as I before took notice, that when the Head can be pushed up, the Child may, cateris paribus, be turned, and brought out by the Feet, instead of putting the poor Woman to fo much Pain and Trouble, by fo long and tedious an Operation.

Sect. 17. In the next Page you fay (m), When the Face presents, resting on the upper Part of the Pelvis, the Head ought to be pushed up to the

Fundus Uteri, the Child turned and brought by the

Feet, because the Hind-head is turned back on the 'Shoulders, and unless very small, cannot be pulled

along with the Forceps; but should it advance pret-

ty fast in the Pelvis, it will sometimes be delivered alive, without any Affiftance: But if it descends

flowly, or after it is low down, flicks for a confiderable Time, the long Pressure on the Brain frequently destroys the Child, if not relieved in Time, by turn-

ing or extracting with the Forceps.

You certainly had no Occasion to say here, that the Child must be turned, because the Hind-head is turned back on the Shoulders, and unless very small, cannot be pulled along with the Forceps: For if it could be turned, as I observed before, Sect. 14, 15, 16, it should, cateris paribus, always be brought by the Feet, and the Forceps ought never to be thought on; but instead of that you would have the Forceps here first used, as in Numb. 2, 3, and4, &c. &c. And in fuch Cases wherein it cannot be used properly, then you would turn the Child as in this Cafe; which contradicts your Declaration (n), where you say, ' For my own Part, I have always avoided the Use of Instruments as far as I thought consistent with the Sasety of my Patients, and strongly incultated the same Maxim upon those who have submitted to my Infructions: And it likewise is contrary to your Affertion in another Place (a), 'That the Reader ought not to imagine, that I am more bigotted to any one Contrivance than to another,' I observed before, Sect. 7, you make it an indifferent Thing, whether an Operator turn the Child, or bring it with the Forceps: And in the Cases just above mentioned, you advise the Use of the Forceps, when the Child may be turned, and brought by the Feet, because you admit the Head to be above the Pelvis, or may be pulhed up above it; in all which Cases, cateris paribus, the Child may be turned, as well as in this, wherein your beloved Forceps cannot be always used. And in other Places (p), you order the Forceps to be tried, even when the Head is too large, or the Pelvis too narrow, to turn the Child, and bring it by the Feet, because in so doing you may give the Woman a great deal of Pain, and your felf much unnetef-fary Fatigue, and yet, rather than not bring the For-

(o) P. 256. (p) P. 247.

ceps into Use, you direct to try the Forceps, even when the Head is too large to be brought away by the Peet, without the Help of the Crochet; by which Method (the Use of the Forceps) the Woman must un-

dergo a great deal of Pain, and much Fatigue.

Sect. 18. The next Case you mention is the following, wherein you fay (q), 'When the Head is de-tain'd very high up, and no Signs of its descending appear, and the Operator having stretched the Parts with a View to turn, discovers that the Pelvis is narrow, and the Head large, he must not proceed with turning, because after this hath been performed, perhaps with great Difficulty, the Head cannot be delivered without the Affiftance of the Crochet.

You ought to have given as full Directions as posfible, how Readers know when the Head was too large, or the Pelvis too strait for the Cranium to be brought

out whole.

The Diagnostics are to be taken from the Dimenfions of the Brim of the Pelvis, and from the Bulk of the Child's Head. I shewed in my Essay (r), that the general Distance betwixt the Os Sacrum, and the Infide of the Os Pubis, at the Top, was commonly about four Inches and a Quarter, which you also confirm (s); so that an Operator by introducing his Hand, or some of his Fingers across the Pelvis, with one Edge or Side of the Hand, touching the convex Part of the Sacrum, and with the other the Os Pubis, he may form a very good Guess at the Distance of those Bones. This Knowledge is to be obtained by a Perfon frequently introducing his Hand thus into the Pelvis of several Skeletons of different Sizes. The Opeator having by these Means found whether the Pasfage be of its regular Size; or if too small, can nearly guess the Diameter; and then his next Business is to find out the Bulk of the Child's Head.

I shewed in my Essay (1), That from one Side of a

poind of (g) P. 279. (r) P. 287. (s) P. 78. (r) P. 281. new-born & Bould

new-born Child's Head to the other is about three Inches, and a half, in a general Way; but be it more or lefs, the Operator, by measuring its Diameter cross ways, either betwixt two Fingers, or betwixt a Finger and a Thumb, may guess tollerably near as to its Diameter; or by withdrawing his Hand in that Position through the Pelvis betwixt the Sacrum and Pubes may be confirmed, how much it will be necessary for the Head to yield before it can pass into the Pelvis, whose Bones cannot

vield at the Brim.

The next Thing is for the Operator to form a Judgment how far the Child's Head can conform with Safety to the Shape and Size of the Brim of the Pelvis, of which he must judge, cateris paribus, by the Largepels or Smallnels of the Fontanel, or opening at the Angles of each Os Bregmatis, and Os Frontis; or the Sutures betwixt those Bones, and by the Hardness or Softness of the whole Cranium: For if the Bulk of the Head be too large in Proportion to the Entrance into the Pelvis; and that the Opening of the Fontanel is very small, and at the same time, that the Bones of the Cranium are almost all fixed, and so firm as scarce to yield at all, then he may be certain the Head cannot pass through the Brim into the Pelvis. But, on the other Hand, if he finds the Openings, as before mentioned, large, the Bones not firmly united, nor any great Difficulty in making them yield, then there will be no great Doubt but the Head may pass through the Brim into the Pelvis, without letting out any Part of the Contents, altho' it may feem to one not very conversant in these Things, to be too large at first. In this Case therefore, the Child, cateris paribus, ought to be turned, and extracted by the Feet.

S.c., 19. In the Remainder of the last Paragraph you put your Readers upon a very dangerous Method of Practice; for you say, No doubt it would be a great Advantage in all Cases where the Face or Forehead

great Advantage in all Cajes where the Face of Horehead presents, if we could raise the Head so as to alter the bad

Polition, and move it so with our Hand, as to bring the Crown of the Head to prefent; and indeed this

should always be tried, and more especially when the Pelvis is too narrow, or the Head too large; and when we are dubious of faving the Child by turn-

Whoever attends to what I have advanced in Sect. 1st, 2d; 4th, and 5th, will eafily see that your Instructions here are quite wrong, and attended with many bad Consequences; And I have shewn in the last Section, that the Child may be faved by turning, altho the Head may be fo large, or the Pelvis fo narrow, that the Child cannot pass the Brim by the fole Efforts of the Mother, and even when the Vertex presented with the Forebead to the Side, or Back-part of the Pelvis, and when the Woman bas bad ftrong Pains for many Hours after the Membranes are broke, and the Head resembled the small End of Sugar Loaf.

You then fay, ' If you succeed, and the Woman is frong, go on as in natural Labour; but if this fails, then it will be more advisable to wait with Patience

for the Descent of the Head, so as that it may be de-

hivered with the Forceps, and confequently the Child

may be faved.

Secti

Here again you have directed a Method of Practice very pernicious to the Mother, and very dangerous to the Child, by keeping its Head longer compressed than necessary, because, if the Child's Head (which is too large, and the Pelvis too narrow, as you have stated the Case) can be brought down into the Pelvis by the sole Efforts of the Mother, I will venture my Reputation as a Practitioner, that it might have been fooner delivered by turning the Child, and then confequently the Head would not be fo long compressed, whence some of the Mischiefs before taken notice of, may be avoided, Sect. 2. Numb. 2. And, in the next Place, I am as certain, that if the Woman be fo ffrong, (which you here suppose) as to propel the Head, as above mentioned, into the Pelvis, that then, cateris paribus, the fame Means will expel it out of the Pudendum, where there is less Resistance, and this you are convinted of, because you say, in another Place, The Distinctive, when the Head is high up, is from the Restrains at the Brim, and when it passes that, the Head is seldom retained in the lower Part, unless the Patient be weak. Why then do you advise the Head to be lest in a compressed Condition in the former Case, and to wait with Patience for the Descent; and yet in the latter Case, where it cannot be so compressed, advise your Pupils to deliver immediately, when the Head is at the Os Externum, because you say, the Child is frequently lest by the violent Compression of the

Brain ? p. 245, 247.

I cannot leave this Paragraph without taking notice. that by your Words it feems as if the principal Intention of waiting with Patience for the Descent of the Head, was only to have the Child delivered by your beloved Forceps; or elfe why are you under fuch great Apprehensions at the bad Consequences of a violent Compresfion of the Brain (as you tell us in your next Page) when the Face is at the Os Externum, that the Child must be (peedily delivered; and yet you can wait with fo much Patience for the Descent of the Head, so as that it may be delivered with the Forceps, while it is more violently compreffed by the Refraint of the Brim of the Pelvis, and whence the Injuries must be greater on all Sides. Nay, you acknowledge. . That the chief Caule that prevents the Child's Head from being delivered when low in the Pelvis, is by the Uterus strongly contracting round the Child's Neck, even when the Head is to loofe in the Pelvis, that we can fometimes pufh our Fingers. all round it. Whence it is evident, the Brain cannot be greatly compressed there; nor yet can the Os Externum forceze it to much as the Brim of the Pelvis

You then add, When the Face of the Child is come, and sticks at the Os Externum, it foldows can be returned, on account of the Contraction of the Uterus? But I mult observe, that in such a Case, when both Mother and Child are regularly made, that the Head can never be returned into the Womb, above the Pelvis.

Sect. 20. In the same Page you tell us, ' When the Chin is towards the Sacrum, the Hind-head prefled back betwixt the Shoulders, fo that the Face is kept from rifing up below the Os Pubis, the Head must be pushed up with the Hand to the Upper Part of the Pelvis, and the Forceps introduced, and fixed

on the Ears, &c.

Now, if the Uterus be so little contracted, that the Head may be pushed up with the Hand; an able Operator might turn and extract the Child by the Feet, which, for the Reasons already assigned, is fafer than to deliver with the Forceps: And for the same Reason. the Method recommended by you in your general Makims for using the Forceps, must be wrong, because you say (u), 'Let the Parts be opened, and the Fingers pals the Os Internum; in order to which, if it cannot be otherwise accomplished, let the Head be raised two or three Inches, that the Fingers may have more Room; if the Head can be raised above the Brim, your Hand is not confined by the Bones.' Now if the Head can be raised two or three Inches, I am certain the Child may be fafely turned, and extracted by the Feet, because the Head is not so large, but it will pass the 3rim of the Pelvis without too much Compressure.

Sect. 21. When the Child presents with its Head, and can neither be delivered when turned, nor be extracted whole, whether alive or dead, the Head must be opened, and its Bulk be leffened, for the Security of the Mother's Life. Various Methods of performing this Operation have been contrived; the chief of which I have fet forth in my Essay (w), wherein I have fairly shewn most of the Advantages and Inconveniencies attending each Instrument, and Manner of using it: I shall therefore only in this Place take notice of fuch as are preferable to those recommended by you; by which I believe it will appear, that your Method is neither the easiest, safest, nor so expeditious as that recommended by me.

the Head can never be returned too the (u) P. 284. (w) From Sect. 101, to 107, inclusive.

3336

After speaking of several Instruments for Delivery you tell us (x), There are other later Contrivances used and recommended by different Gentlemen of the Profession, such as Mauriceau's Fire-Tète, Simpfon's Scalp-Ring, (which the Inventor calls in Ring Scalpel) s and Ould's Terebra Occulta, with the Improvemments made in it by Dr. Burton of York i all these Instruments may be used with Success, if cautiously managed, fo as not to injure the Woman? I can't help taking notice, that in your Introduction, Page 67, you fay, 'Ould prefers his Terebra Occulta to the Sciffars, probably because he did not know the proper Dimensions of this last Instrument. But had you read his Book, and attended to what he fays, you would have found he urged very firong and fufficient Reasons to justify him for his preferring the Terebra Occulta to the naked Sciffars, (which you use) be their Dimenfions what they will; for he fays, Page 165, 'That the opening the Head with the Sciffars is but a poor Contrivance; which put me upon confidering, whether a cutting Instrument might be contrived to as to be introduced into the Womb, without endangering either it or the Vagina; wherefore I confidered, that the last presses almost undiquaque, on every Thing that passes through it, how fmall soever and therefore, that nothing could defend it from the Mischiefs of a cutting Instrument, but something in the Nature of a Sheath, wherein the Knife must be hid till it can be conducted to the Part whereon it is to act-Whence I must remark, that it is not yery candid to attempt to infinuate, that a Person's Ignorance might be the Motive for his Actions, when he has given fufficient Reasons for his Practice; and had you thought

You say in the next Page, 'That the following ! Method, if exactly followed according to the Cir-

them defective, you ought to have shewn wherein that

Defect lay.

monitance of the Cale, seems, of all others hitherto invented, the easiest, safest, and most certain, especially under irrequires great Force to extract the Head. Burt must observe, that the Force necessary to extract the Head, sesses as the Head diminishes in Bulk; so that where the Size thereof was the only Obstacle to in Expulsion, the Cause being removed, the Essect most code a but I cannot help saying, that your using the Expression of great Force to extract the Head, deems to be with a View of having your Forceps, or, (the next to it) the double Crotchet used, because great Force is required.

You then tell us, \* The Operator must be provided with a Pair of curved Crotchets, a Pair of Scissars about nine Inches long, with Rests near the Middle

of the Blades, and the Blunt-hook?

When the Flead preferts as above-mentioned, you add (y), 'If it be not held down pretty firm, by the frong Contraction of the Uterus, let it be kept fleady by the Hand of an Affiftant, prefling upon

the Belly of the Woman?

You have here recommended a Method of Practice very injurious to the Patient; even supposing it could effectually answer your End (which it will not do) because at this Time the Muscles, &c. of the Abdomen are fo ftretched, and fo fore, that the Patient cannot bear any Pressure that can be of the least Service to keep the Head at, or within the Brim of the Pelvis. fo fixed, that it cannot hip when the Sciffars are applied to it, as hereafter you direct. Why then should the poor Woman be put to more Pain than necessary, effecially as the Head may be kept fast by the Hand, which you direct to be introduced? For you fay, While the Woman's Belly is prefied, first let the Operator introduce his Hand, and press two Fingers against one of the Sutures of the Cranium; then, Secondly, sake his Sciffars, and guiding them by

the Hand and Fingers, till they reach the hairy Scalp, push them gradually into its until their Pro-

gress is stopped by the Rests. Their Points ought to be so sharp as to penetrate the Bodes with a mode-

rate Force; but not lookeen as to cut the Operator's Fingers, or the Vagina, in introducing them.

they cannot be pushed into the Skull at the Suture,

they will make their Way through the folial Bones, if they are moved in a femicircular Turn, like the

Motion of boring, and this Method continued till

you find the Point firmly fixed; for, if this is not observed, the Points slide along the Bones.

Here again you put your Readers upon another infnecessary Operation, which may prove a dangerous one too; for if the Head flips afide in such a Manner, as that the Sciffars Points cannot be pulled into the Skull. at the Suture, what must hold the Skull steady, while the Sciffers make their Way through the folid Bones ? For less Force would hold the Head furn, while the Points were pushed through the Integuments to the Brain, betwixt the Bones of the Granium than is necet-Liry, while you are boring through the Bones. But supposing this Operation to be finished, and the Sciffars thus (2) forced into the Brain as far as the Refts at the Middle of the Blades, wherether are to be kept firm; then, in the third Place, 'The Hand that was within the Vagina is to be withdrawn . And fourthly, The Operator must take hold of the Handles with each Hand, and pull them afunder, that the Blades may dilate, and make a large Opening in the Skull'; then, Fifthly, they must be thut, turned, and again pulled afunder, to as to make the Indifion for rather teaming) crucial by which Means the Opening will be enlarged, and fufficient Room made for the Unitroduction of the Kingers.' The fixth Operation is to close the Sciffars again, and let them be introduced

towen beyond the Refts; when, in the feventh place. they mult again be opened, and turned half round f from Side to Side, until the Structure of the Brain - is foreffectually deftroyed that it can be evacuated with Bafe. This Operation being performed, let the Sciffars, in the eighth Place, be thut and withthe drawn; but, if this Instrument will not answer the Purpose, the Business may be done by introducing sehe Crocher within the Opening of the Skull. The Brain being thus destroyed, and the Instrument withdrawn, let him introduce his Right-hand into the Vagina, and two Fingers into the Opening which hath been made, that if any sharp Splinters of the Bones remain, they may be broken off, and taken out, left they should injure the Woman's Vagina, on the Operator's Fingers.' This compleats your Is that the Stellars Forms cannot be drefinitisted drining.

The Dangers and Inconveniences attending this whole Operation arife, first, from the Introduction of a naked sharp pointed Instrument into the Uterus, or Vagina: Secondly, from the Points of the Scissars slipping off the Bones: Thirdly, from the opening and shutting the Scissars while they remain within the Woman: And, Fourthly, when an Opening is made in the Head, the Operator cannot always introduce a Crotchet, or any other Instrument into the Orifice.

First, as I shewed in my Essay (a), 'That although the Head of the Child be within two or three Inches of the external Orifice of the Pudenda, without any additional Aggravations of swelling, &c. there was great Danger of wounding the Mother, by introducing a sharp naked Instrument; how much more then must the Danger be increased, when the Head is at a greater Distance, or inclosed in a swelled part?

Add to all this the Patient's Motion of her Posteriors.

from her Pain, &c. the least Alteration of which

might be of the worst Consequence, while this naked Instrument is within the Vagina, or Womban went

The second danger may arise from the Points of the Scissers slipping from off the Bones in attempting to bore through the Cranium; and this may easily happen, even supposing the Head to be fixed, as is evident to any Person who will consider that the Skull is in part convex, whereby the least Motion of the Woman may occasion the Points of the Scissars to slip; or if the Operator should vary his Hand that holds the Scissars in an oblique manner, the Points would again slip: But if the Head moves sideways in such a manner as that the Scissars cannot be pushed into the Skull at the Sitture; the Danger, in this Case, will be increased, because the Bones are harder and tougher, as I observed above, than the Integuments betwirt the Sutures.

Thirdly, Dangers also arise from the opening and shutting of the Sciffars, while they are in part or chiefly I

within the Woman.

In one Place you fay, (b) 'in lingering Labour, when the whole Hand is within the Vagina, it will formetimes be found necessary to infinuate the Fingers with the Flat of the Hand between the Head and Os Internum; for when this Precaution is not taken in time, the Os Uteri is frequently puthed before the Head (especially that Part of it next the Os Pubis) even through the Os Externum.' And I must add, that a large Hand will not pals this Orifice to easily as a smaller; and that the more oblique the Uteros is. the more will these Parts be liable to be protruded, as happened in the Case above-mentioned, Sect. 4. when one Side of the Vagina will also hang like a Bag betwixt the Os Externum and Internum; which you also acknowledged by the Directions you give in another Place (c): For you fay, When the Head is high, the Forceps may be looked in the Middle of the Pelvis but, in that Cafe, great Care must be taken in feeling

with the Fingers all around, that no Part of the Va-

e gina be included in the locking."

You have here acknowledged that the Woman may be injured by the locking of the Forceps, if great Care be not taken in feeling with the Fingers all around; whereby the Parts of the Woman could only be crushed. But what is to guard those very Parts, in the like Case, while you are opening and shutting the Scissars so often, when both Hands are to be on the Outside of the Os Externum, especially as the Patient may not only be bruised, but may be in Danger also of having Pieces cut out betwirt the Axis and Rests of the Scissars? Then, why are these Hazards to be run, when safer Methods may be taken, especially as you acknowledge the Parts next the Os Pubis are more liable than others to hang down, or be protruded forwards?

Fourthly, when the Cranium is opened, the Operator can't always (nay very rarely can) introduce a Crochet, or any other Instrument, into the Opening; especially when the sole Obstacle to the Child's advancing is owing to the Bulk of its Head. For, as I observed in my Essay (d), After the Incision is made, and the Structure of the Brain is in part broken, and the Scissars withdrawn, the very Pressure of the Womb, &c. will squeeze the Edge of one Os Bregmatis in such a manner, as to make it lap over the other, which will render it difficult in all cases, and in some impossible to introduce the Crochet to break the Scructure of the Brain as you direct it. And when the Brain is broken, the Contents of the Cranium will, at every Pain, be more squeezed out, and then one Edge of the

You feem to doubt the Scissars will not sufficiently answer the Purpose, and then say the Fingers are easier introduced than an Instrument, as you direct in your

Bones will be compressed over the other so much more, and thereby render the Introduction of an Instrument

ninth and last Operation, before the Entraction of the Fœtus, because they can be bent while they are within the Uterus or Vagina. Although in this Case you have not told us how the Child is to be delivered, whether to be lest to the sole Efforts of the Mother, or to be affished by the Operator's Fingers when within the Skull; yet I fancy you mean the latter, because, in the very next Case, you say (e), If the Case be an

· Hydrocephalus, let him fix his Fingers on the Infide

and his Thumb on the Outfide of the Opening, and endeavour to pull along the Skull in time of a Pain;

but, if Labour is weak, he must desire the Woman

to affift his Endeavours by forcing down; and thus

the Child is frequently delivered, because, the Wa-

ter being evacuated, the Head collapses of course.'

This is the tenth and last Operation. This is the soul to

Sect. 22. You have here put your Readers upon a very dangerous and tedious Operation, especially as you acknowledge it does not require very great Force to extract the Child, after the Head is opened, and the Structure of the Brain is broken. The Dangers of your Method I have set forth, and now I shall shew a much faser, easier, and expeditious one, which is chiefly taken from my Treatise on the Theory and Practice of Midwifry; and I shall likewise set forth the pretended Inconveniences thereof in their full Light, and answer such Objections as have hitherto come to my Knowledge.

I will now suppose a Patient in the same Condition as stated by you in the last Section, in which case,

I have directed (f) the Fingers, or one Hand if requisite, the Left suppose) to be introduced into the

Vagina, to reach the Child's Head, by which the

Operator may find the Situation of the Head; and, if it be not fixed, can therewith hold it, while, with

a Thumb or Finger, he find the Sutura Sagittalis,

and Lambdoidal Suture; into the first of which the

Hand its with time of

<sup>(</sup>e) P. 301. new Edit. Numb. 3. (f) P. 233. Sect. 107.

M 2 Inftru-

Instrument is to be introduced, or as near as possible to the Apex; then with the other Hand the Operator must take my Extractor, holding his Fore-singer against the End of the Capsula next to the Handle, to keep it firm, with that Side of the Capsula in which the Skrew is fixed toward the Hand that is introduced, and gently slide the other End of the Capsial along the Hand or Fingers that are within the Vagina, till it reaches the Child's Head, whereby the Upper end of the Capsula will be guided to the Suture into which the Piercer is to be forced, while the Child's Head is kept fixed by the Fingers or Hand that is in the Womb.

Thus fan both our Methods are nearly alike; excepting that by mine the Patient is no way tormented by any of the Affistants compressing her Abdomen, in vainly attempting to hold the Head fast; and that she cannot be injured even if she was to move her Buttocks very much, because my Instrument is guarded by the Capsula from hurting her in every Respect, while yours is quite naked.

The next thing to be done to the Child is to break the Fabric of the Brain, which 'I do by expanding the Wings of my Extractor, that are already within the Cranium, which is done by applying the Thumb of the Right-hand to the Screw or Bottom that is inthe Handle of the Instrument, and thrusting it up; and then turning the Instrument half round once, twice, or thrice, will sufficiently destroy the Struc-1 ture of the Brain; that, whenever the Head is squeezed, the Contents will eafily be discharged; especially as " those Parts nearest the Orifice are most broken, and as that Part of the Skull is to yield the most. Add to this, that, during this Operation, the Woman is not the least sensible of any Motion, because the Instrument is only moved half round and returned again within the Hand that is introduced. But, instead of this easy Motion, you are obliged first to withdraw your Hand, from within the Vagina. Secondly, with both Hands

HILLIM

Hands to expand the Handles of the Scissars to dilate the Skull. Thirdly, to shut, turn, and again expand the Handles. Fourthly, to shut the Scissars, and introduce them farther. Fifthly, they are to be expanded again, and turned half round from Side to Side, to break the Brain. And Sixthly, the Scissars are again to be shut and withdrawn. But, in case this Method does not effectually destroy the Structure of the Brain, of which you have given no certain Rules to know by; then the Crochet is to be introduced within the Opening of the Skull to perform the Work; the Difficulty of doing which is already explained, Sect. 21. No. 4.

Sect. 23. After breaking the Structure of the Brain, the next thing is to have the Patient delivered, whether by the Efforts of the Woman alone, or by other Affistance from the Operator. If the sole Obstruction to the Birth of the Child has been owing to the Size of the Head being a little too bulky, then by removing the Cause the Mother can bring forth the Child without any other Assistance; which may be forwarded a little by the Operator, who may either squeeze the Bones of the Head almost close, and extract them with his Hand; or may introduce a Finger or two into the Opening of the Child's Skull, and therewith assist

the Mother's Efforts.

But you say (g), 'When the Pelvis is narrow, the 'Head requires much greater Force to be brought along, unless the Labour-pains are strong enough to press it down and diminish it, by squeezing out the Cerebrum; in this Case, let the Operator withdraw his Fingers from the Opening;' (which I observed, Sect. 21. was your tenth Operation) 'and slide them along the Head, past the Os Uteri;' (whence I must remark that all the other Operations have been performed by you, while the Head was above the Os Uteri, and within the Uterus; hence the Dangers to the Mother are greater; 'then, in the twelsth Place,

<sup>(</sup>g) P. 301. Numb. 4. M 3

with his Left hand taking one of the Crochets, introduce it along his Right hand, with the Point towards the Child's Head, and fix it above the Chin, in the "Mouth, back Part of the Neck, or above the Ears, or in any Place where it would take firm Hold. Having fixed the Instrument, let him, in the thirteenth ' Place, withdraw his Right-hand, and with it take " hold on the End or Handle of the Crochet; then, fourteenthly, introduce his Left-hand to feize the

Bones at the Opening of the Skull (as above directed)

that the Head may be kept steady, and pull along

with both Hands.

All these painful Operations of introducing the Hand along the Child's Head, betwixt it and the Uterus-of introducing and fixing the Crochet with, at best, an uncertain Hold-of withdrawing one Hand, and introducing the other, may be avoided: For my Extractor being introduced, the Wings expanded, as mentioned in Sect, 22, and one of each Wings being fixed against the Centre or strongest Part of each Os Bregmatis, as directed in my Treatise (b), which is done in course, when the End of the Capfula is across the Suture, as may be felt by the Finger that is within the Vagina or Uterus; then the Operator must keep the End of one · Finger on the Outlide of each of the Os Bregmatis, fo that the Bones may be firmly held betwixt the Wings and Ends of the Fingers; by this means the Operator will find if the Bones and Integuments give way when great Force is applied, which, if the Child has been long dead, or if there be an Hydrocephalus, they fometimes will do.' But then in that State, when the fole Obstacle to Delivery has been the Bulk of the Head, sublata causa tollitus effectus, and so the Child will be brought out with very little Force, if any Affiftance should be wanting to be added to the Mother's Efforts, in which Case the above Hold will be sufficient.

The Instrument and Fingers being fixed as above directed, the Operator must extract the Child, pulling with both Hands, one having hold of the Instrument

within the Vagina, with the Fingers against the Skull,

and the other having hold of the Handle of the Extractor. Hence the following Advantages are evident:

For, first, this Instrument being fixed in the Vertex, guides it directly in the Centre of the Passages.

Secondly, 'By pulling that Part, it makes the Head more oblong, and confequently of a leffer Diameter,

which you allow (i) to be an Advantage."

Thirdly, 'If there be Occasion to pull one Side of the Head more than the other, so as to get it from under, either the projecting Part of the Sacrum, or Os Pubis, it is easily performed by drawing the Handle, in the first Case, towards the Os Pubis;

in the last, towards the Perinæum.'

Fourthly, 'The Structure of the Brain being broken, the Cerebrum is easily squeezed out through the Opening made with the Piercer, as the Bones are compressed, and are at the same time prevented from collapsing by the Extractor; for the more they lap over, the more they hinder the Exit of the Brain.'

Fifthly, 'The Wings of the Instrument being fixed against the strongest Part of each Os Bregmatis, the greatest Force may be exerted with less Danger, cæteris paribus, than by any other Instrument; be cause nothing can yield, but the Operator may feel it with his Fingers; and the Force is applied to a greater Surface; for the Wings do not pull with their Ends, but with their flat Sides, against the Bones, whence

the Extractor will not so easily slip as the Crochet, as used by you in the Case above-mentioned.

Sixthly, 'The Danger of wounding the Patient, as with the Sciffars, Crochet, or other naked Instrument, is avoided.'

Seventhly, It is evidently fixed with more Eafe and Safety to both the Woman and the Operator.' All which Advantages are apparent to the weakest of Capacities. And, eighthly, that Instrument may be withdrawn at any Time with Safety; for by pulling with the Thumb at the Screw or Button of the Handle of the Extractor, the Wings are brought parallel to the Sides of the Staff; and by pushing with the Forestinger of the same Hand against the End of the Capfula next to it; or by holding that Tube by the Hand that is within the Vagina, the Piercer is brought into the Hollow of the Capsula, and the Woman is again secured from being injured by its Point or Edge.

Sect. 24. In the last-mentioned Case, wherein much greater Force was requisite than in the preceding, if one Crochet and one Hand cannot perform the Operation, then you say (k), 'If the Head is still detained by the uncommon narrowness of the Pelvis, let him introduce his Lest-hand along the opposite Side, in order to guide the other Crochet, which is the sour-teenth or fisteenth Operation; then, in the sixteenth place, guide and lock it with its Fellow, in the manner of the Forceps; and, in the last Place, pull

as directed with them,

eventhis.

I must observe, that your Instructions in this Case are not so clear and perspicuous as they should be, because there is a great deal of Difference between a Child's being hindered from advancing by the Throws alone, from its Head being too bulky, with a natural proportionable Pelvis, and when it is obstructed by one that is too narrow. In the first Case, barely lessening the Head by discharging some of its Contents, will cæteris paribus answer the End; or however with a moderate additional Force, as mentioned in Sect. 22, 23. But, in the latter Case, although the Head be ever so much lessened, yet it can be advanced no farther than into the Pelvis, because the Shoulders and Thorax of the

Child will yet flick above, or in the Brim, by the ancommon Narrowness of the Bones composing that Opening; which you fay, in the next Page, feldom occurs, and od yet, in a few Lines after, you tay, it most commonly is the Cafe.

In Sect. 48. I gave some general Rules to find out the Diameter of the Brim of the Pelvis, and if the Operator finds the Sacrum and Os Pubis too near each other, after having leffened the Head sufficiently, if the Child do not advance with a reasonable Force, another Method ought to be taken than to pull at the Head. whole Bones are, in that Case, soon separated; the Method of doing which I shall speak to presently. after having made my Remarks on your next Opera-White of the board estre bright with the win tion.

Sect. 25. Sometimes in these Cases, Sect. 22, 23. 24, you say (1), 'When I find that I cannot succeed by pulling at the Opening with my Fingers; and if the Woman has not had strong Pains, Lintroduce the fmall End of the blunt Hook into the Opening. " (which is the feventeenth Operation) and placing my Fingers against the Point on the Outside of the Skull. pull with greater and greater Force, (which is the eighteenth) but as we can feldom take a firm Hold in this manner, if it does not foon answer the Purpose, I. in the nineteenth Place, introduce my Fingers, as above, farther, and flide the Point up along the Outfide above the under Jaw; and have succeeded ' feveral times with this Instrument, except when the · Pelvis was so narrow as to require a greater Force, then we must use the others. No doubt it is better first to try the blunt Hook, because the managing the Point e gives less Trouble, and it can be easier introduced with the Point to one Side. When the Instrument is far advanced, this Point may be turned to the Head; and as a very narross Pelvis seldem ocaurs, the blunt Hook will commonly succeed.

I must remark here, that first you lay it down that the blunt Hook will commonly succeed, because a narrow Petvis seldom occurs: Secondly, that it is easier introduced, and the Management of the Point gives less Trouble.

As you have given these Reasons for first using the blunt Hook, after your dangerous and tedious Methods of opening the Head, and breaking the Structure of the Brain, as directed by you in Sect. 21. I hope you will allow me to use the same Arguments that you have brought; for certainly they are full as ftrong in my Hands as in yours. And if you allow these to be sufficient for preferring the Use of the blunt Hook to that of the Fingers or Crocher, will not the same Parity of Reasoning hold good in other Cases? Is it not partly for these Reasons that my Extractor must be preferable to your Sciffars, &c? Are not the Wings of my Extractor, which are already introduced into the Cranium easier expanded and fixed there, and with less Pain to the Woman, than to introduce your Hand into the Vagina or Uterus, and then afterwards to introduce and fix the blunt Hook into the Head, as you direct? And if, by placing your Fingers against the Point of the blunt Hook on the Outfide of the Skull, you can pall with greater and greater Force, when you have only held of one Os Bregmatis, or only one Bone of the Skull, with how much greater Force may a Person pull, when my Instrument is fixed to both Sides, whereby the Hold is yet firmer, and consequently greater Strength may be exerted? And when the Hook has only Hold on one Side, it must guide the Head the same Way, and at the same time will pull only an Edge of the Bone into the Centre of the Passage, because the Hook takes hold so near the Edge, which is the weakest Part of the Bone; whereas each Wing of my Extractor reaches nearer to the Centre of each Os. Bregmatis, where the strongest Parts of Offication are. For which Reason, unless the Bones of the Brim of the Pelvis were to give way, they could not bring

those Bones of the Cranium edgeways, especially while the Fingers are pressed on the Outside of the Skull, on each Side of the Extractor against the expanded Wings, by which a Person may take a very firm Hold, if my Directions be pursued.

You then fay, 'If the Method of introducing the

'Hook into the Opening of the Skull does not and fwer the Purpole, you, in the twentieth Place, in-

troduce your Fingers as above farther, and flide the

Point up along the Outfide above the under Jaw.

Every Person who will consider the Consequence of fixing and pulling at a Hook sastened above the under Jaw, will find, first, that the under Jaw will not bear so much Force as may be applied by my Extractor, as is evident to any Man who knows the slender Union of the Sides of the under Jaw; and if the Child has been so long time dead, that the Bones of the Cranium are become so loose, as not to bear pulling at, will not the Fastenings of the under Jaw be equally corrupted, and be also sooner separated?

Secondly, It is evident to every one, who knows the Shape of the Head, that any Force applied above the Chin (as you advise) will turn the Apex directly to one Side of the Passage; and at the same time; as the Head has been opened, the Edges of the Bones of the Cranium may wound the Uterus or Vagina; both

which should be avoided.

Sect. 26. In the next Place you add (m), 'If, when the Head is delivered in this manner, the Body cannot be extracted, on account of its being swelled of a monstrous Size, or (which is most commonly the Case) the Narrowness of the Pelvis, let him (the Operator) desist from pulling, less the Head should be separated from the Body, and introducing (which is the twenty first Operation) one Hand, fo as to reach with his Fingers to the Should der-blades, or Breast.' (In the twenty-second Place)

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towards the Fœtus, and fix it with a firm Application; then (in the twenty-third Place) withdrawing his Hand, employ it in pulling the Crochet, while the other is exerted in the fame manner upon the Head and Neck of the Child. If the Instrument degin to dose its Hold, he must (in the 24th Place) push it farther up, and fixing it again, repeat his Efforts, applying it still higher and higher, until the Body is extracted.

of the Paragraph you told us, a very narrow Pelvis feldem occurs; and now you say the Body of the Child cannot be extracted on account of the Narrowness of the

Pelvis. which is most commonly the Gafe.

In the next Place, here are four different Operations to be performed: First, the Person is to introduce one Hand, so as to reach the Shoulder-blades, or Breast; and this I must observe you order to be done while the Head, or however the Neck of the Child is in the Os Externum (or else the Head cannot be said to be delivered) in which Case it is evident, that the farther the Hand is pushed up, while either of the above Parts are in the Os Externum, the Woman must be put, not only to more Pain, but must be also in Danger of having the Perinaum torn, since both the Child's Head or Neck and the Operator's Hand, and perhaps his Arm (if there be Occasion to push it high up) are in the Os Externum at the same Time.

For the first Operation, you order the Fingers to be introduced to reach the Shoulder-blades or Breast of the Child. You have so stated the Case, that the Advancement of the Child is prevented by some or more of these three Articles, viz. To its being much swelled, being of a monstrous Size, or (which is most commonly the Case) to the Narrowness of the Pelvis, and not to its being misplaced either in or above the Brim of the Pelvis. Wherefore, in the two first Cases, from what Cause some

foever they foring, if the Parts be fo large as net to be extracted by the Force already mentioned, the Operator will find a very great Difficulty in introducing his Hand as far as the Shoulder-blades or Break of the Child. because he must then force his Fingers betwixt the Os Pubis or Sacrum and those Parts of the Child, fo far as to enide the Crochet to take a firm Hold. And if those Parts be so large, as to stick therein, notwithstanding the Force above-mentioned, this Operation cannot be easily accomplished but with the greatest Violence; and the Parts of the Woman, that lie betwixt the Child and Bones of the Pelvis must be greatly crushed both by the Hand and Crochet; or elfe the Shoulders must be pushed up higher, to make room for them, in which Case, the Head (which you suppose to be delivered) must likewise re-enter the Vagina, as will be pretty clear to any Person who remembers the particular Dimensions of the Pelvis which you gave us, and knows the general Length of a Child's Neck! Moreover, the Crochet (which is not made to vield) must add to the Bulk of the Child, already too large: You ought to have directed what fort of a Crochet should here be used; for the crooked fort will, in this Case. diffend the Parts more than the strait one, and will be more difficult to be introduced and fixed

Your second Operation is to introduce and fix the Crochet with a firm Application, which, as you direct, must be either on the Shoulder-blades or Breast.

I shewed, in my Essay on Midwisery (n), 'That the Articulations of the Limbs of new-born Children' are very slexible, their Ligaments being extraordinary long, and the Epiphises and Apophises of the Bones being composed of the softest Cartilages.' Whence it is evident they will yield considerably several ways; it therefore is proper to examine which way the Passin question will yield most.

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Whoever confiders the Motion of the Thorax in the Action of Inspiration and Expiration of the Air, will find, that the Motion of the Ribs is upwards towards the Head, and that the Breast is more in Circumference in that State than before: and therefore, whatever brings either all, or part of the Ribs towards the Head, must in such Proportion increase the Diameter of the Thorax. Let him likewife remember that the ribs are made to yield greatly downwards without Injury; but cannot move upwards with the fame Ease or Safety: From all which it is evident. that that Method which can answer the same End, without any (or however much lefs) Approach or Rifing of the Ribs towards the Head, must, cæteris paribus, be in such Proportion a better and safer Method of De-CHECK SEC. SHORT ARE SHOWER SHOWS IN THE THOUSE

Much the same may be said in regard to the Shoulders; for whoever will be at the Trouble of examining, will find, that, when the Shoulders are pressed downwards from the Head, the lower they descend, the less the Circumference round the Child will be; and vice versa: Whence, after the Head is advanced, the fixing the Crochet upon or into the Shoulder-blades, and pulling thereby, must increase the Bulk of the Child more than by the same Force drawing the Shoulders towards the Hips. Whence likewise it is very apparent, that that Method which will press down the Shoulders as last mentioned, must, cæteris paribus, be best.

After you have fixed the Crochet, your third Operation is, to withdraw your Hand, and with it to pull the Crochet, while the other is exerted in the same manner upon the Head and Neck of the Child. But would it not be better for the Operator to grasp the Crochet also with the same Hand that takes hold of the Neck of the Child, because then, in case the Head and Neck should advance, he can the better judge whether the Parts to which the Crochet is fixed do the same?

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Your fourth Operation you say is, If the Infrument begin to lose its Hold, the Operator must push it farther up, and sixing it again, repeat his Efforts, applying it still bigher and bigher, until the Body is extracted. But I must observe, that the higher the Instrument is pushed, cæteris paribus, the more difficult is the Operation; and the nearer it approaches to the Child's Abdomen, the less firm will be the Hold, and consequently that Method cannot answer the End.

Having now made my Remarks upon this tedious and dangerous Operation, as well as having taken Notice of some of your Omissions, I shall now demonstrate a more expeditious Method, easier to both Patient and Operator, and less dangerous to the Mother.

Sect. 27. In Sect. 22, I shewed my Method of penetrating the Skull, and breaking the Structure of the Brain; and in Sect. 23. how my Extractor was to be fixed, with the fuperior Advantage it has to your Method, as well as in extracting the Head. Sect. 25. And should it so happen that the Bones of the Head will not bear sufficient Force to extract the Shoulders and Breaft, the Operator may draw the Wings on each Side down again parallel to the Staff as I directed above, Sect. 23. which being done, let him direct the Upper-end of the Capfula, which was against the Cranium, to the Opening at the upper Part of the Sternum, where the Thymus Gland lies, being guided and held there by the Fingers, which were placed on the Outfide of the Skull, and then he must push the Piercer into that Part, and expand the Wings, which will not only have a firmer Fastness, as they take hold of a larger Surface than the Crochet; but also are applied to the strongest Part of the Breast, and will draw the Child more in the Center of the Passage than when a Crochet is fixed only on the Outlide of the Thorax. Here also it is evident, for the Reasons just mentioned, Sect. 26. that the Parts of the Woman will not be fo much extended by this Method.

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Sect. 28. In the next Place you fall foul on fome of your Brethsen (a), for telling us, That the Head . comes down fornetimes in a broad flatten'd Form : But then you fay, 'Their Ideas of thefe Things are imperfect and confused; for if this were the Case, the . down behind with Labour Pains, into a narrow Pelvis because the Presture in both Cases acts in the fame direction; whereas we always find, both in one and the other, that the Vertex is protructed in a parrow Point, and the whole Head is squeezed into a

Iongilli Form.

Let the Reader here determine whose Ideas are most confused: For in one Place (p) you tell us, 'The Extene of the Brim of the Pelvis, from Side to Side, is one Inch more than from the Back to the Forepart. In another Place you fay (q), The Vertex is formetimes preft, and remains quite flat.' And in another Pare you inform us, (r), "That the Child's Head is often long confined, and fo compressed in the Pelvis, \* that the Bones of the upper part of the Cranium are s squeezed together, and ride over one another, in diffe-\* rent manners, according as the Head prefented : When \* the Fontanelle prefents, and is puffied down, the Form of the Head is raised up in the Shape of a Hog's Back." And again you tell us s), The Head is liable to be " fquetzed into various Shapes." And consequently if the Pelvis be narrow, cateris paribus, the Head in fome Cafes must be in a flatten'd Form .- But I must observe, thar, in the Paragraphe above-mentioned (1), you are fo far from being clear and perspicuous, that you have confounded Things, and have not made a proper Diffinction betwixt compreffing a Child's Head unopened and when the Contents are evacuated. In the first case, whether the Head be compressed by a narrow Pelvis or by the Forceps, the Brain will in part

<sup>(</sup>e) P. 305. (p) P. 78: (c) P. 85. (t) P. 305. (9) P. 86. (r) P. 90, 436.

be protruded towards the Apex; where, you tell us (u), there is least Resistance, because the Occiput and Forepart of the Bottom of the Skull will not so easily give way; whereby the Vertex will be lengthen'd: But in the latter Case, after most of the Brain is discharged out of the Skull, the compressing Force as above, will make the Bones of the Cranium collapse, without always protruding the Vertex in a narrow Point, as there is no Resistance from the Contents within.

In your next Paragraph (w) you have not shewn that Candour and Moderation which the Review Writer, No III. commends you for; nor yet are you so free from vain Exaggerations as he informs us. For you say, 'Altho' many People exclaim'd against the Crochets as dangerous Instruments, from Ignorance, want of Experience, or a worse Principle; yet I can affure the Reader, that I never either tore or hurt the Parts of a Woman with that Instrument. I have, indeed, several Times hurt my Hand by their giving way; till I had Recourse to the curve Kind, which in many Respects have the Advantage of the streight;

and I am persuaded, if managed as above directed,

will never injure the Patient.

Notwithstanding your Reslection upon some of the Faculty, without any other Cause than that they differ from your Opinion, yet, you see, I have ventured to attempt (and I hope with Success) to prove that the Use of the Crochet is attended with great Danger; and have demonstrated, that there is a much safer, easier, and more expeditious Method, both for the Patient and Operator, than with that dangerous and almost useless instrument: You seem in part to be convinced and to acknowledge, that there are Dangers attending the Use of the Crotchets; because you own, (x) that you several Times have hurt the Inside of your Hand by their giving way: Wherefore they ought to be avoided. You likewise say, Indeed

(u) P. 89. (w) P. 305. (x) P. 306.

young Practitioners, till they are better informed by Cultom and Practice, may, after the Head is opened, try to extract it with the small or large Forceps." If they may take this last Method, then why have you hitherto been instructing your Pupils (for whose sake your Book was chiefly intended) to use those dangerous Instruments as well as the Scissars, when so many Mischiefs may attend them both?

Having, I hope, demonstrated the Superiority of my Method of delivering Women with my Extractor, in the Cases mentioned, both for Ease, Safety and Expedition, I shall, as I promised, take notice of such Objections to its Use, that I have ever met with, and

sect. 29. First, says one, if the Infrument should flip, then what is to become of the Woman? This wife Objection holds equally good against every other Infrument that flips; but I have shewn that it never can flip, as the Crochet may: And if the Child has been to long dead, that the Bones of the Cranium are fo loofe as not to bear any great Force; the other Parts of the Child must also be corrupted in the same Proportion. And if the Delivery has been obstructed only by the Bulk of the Head, that Part is easier opened, and the Structure of the Brain is also broken with more Ease, Safety and Expedition, than by your Method. But I must add, that if the Extractor be applied as directed, it can never flip to hurt any Thing ; because if the Bones give way, the Instrument may be withdrawn.

The 2d Objection was, That the Inftrument was not from enough for the Force requifite to extract a Child. But this wife Objector did not consider the Difference betwixt pulling in a streight Line (by which a small Wire will draw a great Weight) and a Body that is used like a Lever or Gave-Lock. And as Weight and Force are the fame Thing in this Case, he may be foon convinced, that his Objection is invalid, by hanging a considerable Weight to the Infrument, when fixed

fixed in the fame manner as when introduced in the

The 3d Objection I heard of, was made by yourself in your Lectures; wherein you endeavoured to make your Pupils believe it was an useless (tho you faid an ingenious) Contrivance, and could not be used when the Head is above the Brim of the Pelvis: Which is not fact; and some of your Hearers knew to the contrary, having seen me demonstrate its Use in those very Cases, as well as by reading my Book on Midwisery: And the higher the Head is, the more this Instrument has the Preference.

The 4th Objection you have likewise made is in your own Treatise, (y) where you say, Some recommend an Instrument to perforate the Skull, with double Points curved and joined together; which, when pushed into the Foramen, are separated, and take hold on the Inside; but as the opening with the Scissars, and introducing the blunt Hook, as above, will answer the same End, it is needless to multiply Instruments.

If you here, by an Instrument, &c. mean my Extractor (as I suppose you do, because I have never heard or read of any Instrument made with moveable Joints except my own) then you have not fairly represented my Extractor, for the Wings are streight and not curved. The double Crochet of Abucasis, as may be seen in the annexed Plate, Fig. 7. has indeed curved Wings, but then they are fixed and cannot be

separated or extended.

In the next Place; if we are to regard the Number of Instruments sooner than their Usefulness, then your Argument may be retorted very justify against yourself: And as my Extractor will do the Office of two, nay of three Instruments, it, according to your own way of reasoning, ought to be preferred: For, first, you recommend the Scissars (2) to open the Skull, then,

(y) P. 363. (z) P. 299. N 2 fecondly, if they do not sufficiently break the Structure of the Brain, the Crotchet is to be used: And, thirdly, you advise the Use of the blunt Hook to extract the Head; all which will be easier, safer, and more expeditionally performed by my Extractor alone, as I have already proved, to the Satisfaction of every Person, whose Heas of these Things are not impersed and confused.

Sect. 30. In your next Chapter you treat of what you call preternatural Labours, in defining of which you endeavour to make your Readers believe, that your Definition will embarrass and confound young Beginners less than that of others: But I herein differ

from your Opinion.

You say, (a) when the Forehead is hindered from coming down into the lower Part of the Sacrum, by an uncommon Shape of the Head or Pelvis, (when the Feet come first) and we can't extract it by bringing it out with a half-round Turn at the Pubis, we must try to make this turn in a contrary Direction; and inftead of introducing our Fingers into the Child's Mouth, let the Breast of it rest on the Palm of your Left-hand (the Woman being on her Back) and placing the Right on its Shoulders, with the Fingers on each Side of the Neck, press it downwards to the Perinaum. In confequence of this Pressure, the Face and Chin being within the Perinæum, will move more upwards, and the Head come out with a half round Turn from below the Os Pubis: For the Center of Motion is now where the Fore-part of the Neck presses at the Perinæum; whereas in the other Method, the Back-part of the Neck is against the lower Part of the Pubes on which the Head turns.

If the Forehead is not turned to one Side, but flicks at the upper Part of the Sacrum, especially when the Pelvis is narrow, let the Operator endea-

secondly, if they do not 1884 at the break the Structure vour with his Finger in the Mouth, to turn it to one Side of the Jetting in of the Sacrum.3 He divise voy In another Place (b) you fay, When the Hind head' refts at the Os Pubis, and the Forehead at the upper Part of the Sacrum, the Head can feldom be brought down until the Operator, by introducing a Finger into the Mouth, moves the fame to the Side. brings the Chin to the Breaft, and the Forehead into the Hollow of the Sacrum. And in pulling balf the Force is only applied to the Neck, the other balf being exerted upon the Head by the Finger which is fixed in the Mouth. When the Operator, with his Fingers in the Child's Mouth, cannot pull down the Forehead into the Hollow of the Sacrum, let bim pufb the Fore-finger of bis Left-band betwixt the Neck and Os Pubis, in order to raise the Hindhead upwards which being done, the Forebead will come down with

less Difficulty, especially if he pushes up and pulls down

at the same Time, or alternately.

Whoever will consider the tender Union of the two Sides of the lower Jaw at the Fore-angle, (as I mentioned in my Essay (c) will soon be sensible of the great Danger there is of separating them, especially when half of the Force in pulling, as you direct, is exerted by the Finger in the Mouth, while only the other half is applied to the Neck, which would bear a much greater Force than the Jaw, without Injury: And though the Jaw should not be quire separated, yet Children frequently receive great Mischies, and sometimes can't fuck; as you acknowledge in Pag. 435.

To avoid these Dangers, I have directed in my Treatife, that the Operator, in your first mentioned Case, should apply his Finger on the Outside of the Child's Jaw, and turn the Chin on one Side by which no Injury can enfue. And in the latter Cafe, I advise, 'As soon as the Child's Shoulders have passed the external Orifice of the Vagina, with its Face to

(b) P. 319. (c) Sect. 56. p. 136.

broke the Child is felt through

the Mother's Back, that the Operator should slide his Hand, with the Back to the Child's Breast, and introduce a Finger to the Side of the Neck, obliquely upwards, till the End thereof reaches to the Back of the Child's Head; there by thrusting with the Finger the Chin will be pressed towards the Child's Breast, or towards the Shoulder if necessary, while with the Fingers of the other Hand, placed on each Side the Neck, I extract the Child. Whence feveral Mischies may be avoided. For, first, neither the Jaw nor Mouth of the Child can this way be injured.

Secondly, The Danger of tearing the Perinaeum, or putting the Woman to greater Pain by introducing the Hand into the Vagina, in order to get the Fingers so high up as the Child's Mouth, are likewise

avoided:

odz

Thirdly, The Introduction of the Finger on the Side of the Child's Neck, as I direct, gives less Pain to the Woman, than when it is forced betwint the Os Pubis and Neck; by which the Operator's Finger would be more compressed, whence greater Force

would be required from him.

Fourthly, Because my Method of applying the Finger to the Back of the Child's Head, brings the Fore-head down with less Difficulty, as you acknowledge; and is so much easier, and more safely performed; whereby the Danger of exerting balf the Force at the Chin may be avoided: Therefore why do you direct your Pupils to try the other less certain Method? I am also as much at a Loss to know why you advisethem to push up and pull down at the same Time, or alternately. What Business the word alternately has in this Place I can't tell because unless the Operator pull with one. Hand at the same time that he thrusts with the other, the Child's Head may return to its former Situation.

Sed. 31. You tell us (d), 'When before the Mem-

[ 183 ]

presenting wrong, and at the same Time the Pains push them down, so as to dilate the Os Internum more or less. The Membranes being broke, and the Operator's Hand being betwirt the Infide of the Membranes and the Child's Body (e), let him turn the Child with its Head and Shoulders up to the Fundus, the Breech down to the lower Part of the

Uterus, and the fore Parts towards the Back.'

You have here put your Pupils upon a very needless and troublesome Operation; because, as you state the Cafe, if the Operator attempts to turn the Child's Head and Shoulders up to the Fundus; as foon as he withdraws his Hand, the Pains will force them down again; wherefore, instead of this fruitless Operation, the Person should take hold and extract the Feet, and as they advance, the Child turns to the Fundus with great Ease; for as the Buttocks descend, the Head and Shoulders afcend; because the Uterus does not closely embrace the Child, as it is turned to foon after the breaking of the Membranes; neither is the Head any way compressed against the Brim of the Pelvis.

Sect. 32. You tell us (f), 'If a Woman is attacked with a violent Flooding, occasioned by a Separation of all or any Part of the Placenta from the Uterus, during the last four Months of Pregnancy. and every Method has been in vain tried to restrain the Discharge, according to our present Directions

in Book ii. Cap. 3. Sect. 3.

First then, you say (g), When the Mouth of the Womb is opened, if the Head prefents, and the Pains are strong, by breaking the Membranes the Flooding will be diminished; but if she sloods to such a Degree as to be in Danger of her Life, she must be delivered in the following Manner.

Secondly, the greatest Danger, you tell us (b), in this Cafe, frequently proceeds from the fudden emp-

<sup>(</sup>b) P. 334. n. Ed. (f) P. 331. n. Ed. (g) P. 333. n. Ed.

rying of the Uterus and Belly: For when Labour comes on of itself, or is brought on in a regular Manner, and the Membranes are broke, the Flooding is gradually diminished, and first the Child, then the Placenta, is delivered by the Pains; so that the Pressure or Resistance is not all at once removed from the Belly and Uterus of the Woman, which have time to contract by Degrees; consequently, those fainting Fits and Convulsions are prevented, which often proceed from a sudden Removal of that Compression, under which the Circulation was performed.

In order to anticipate these fatal Symptoms, I have (sometimes successfully) ordered an Affistant to press upon the Woman's Belly, while the Uterus was emptying; or after having broke the Membranes, turned up the Head to the Fundus, and brought Y down the Legs and Breech, I withdraw my Arm a · little, to let the Waters come off, though I keep my hand in the Uterus for a few Minutes, and do not extract the Legs until I feel the Womb close contracted to the Child; nay, if the Flooding is stopped, or even diminished, let the Child remain in the Uterus perhaps ten or fifteen Minutes longer, then deliver; and if the Hæmorrhage is stay'd, leave the Placenta to be expelled by Nature. In all thefe Stages, however, when the Flooding is violent, we must deliver without Loss of Time, remembring Aill the Pressure upon the Abdomen; for the Woman is frequently so very weak, that although Labour could be brought on, she would not have Strength fufficient to undergo it.

Immediately after Delivery, the Uterus con-

that the Flooding ceases.

You then fay (i), If in Time of flooding, the La-

of the Child, and opens the Os Internum, the Mem-

branes ought to be broke; fo that some of the Wa-

ters being discharged, the Uterus may contract and

13. f squeeze down the Focus. If notwithstanding this

Expedient, the Flooding still continues, and the

Child is not like to be foon delivered, it must be turned immediately; or if the Head is in the Pelvis,

delivered with the Forceps: But if neither of these

two Methods will succeed, on account of the nar-

rowness of the Pelvis, or the bigness of the Head,

this last must be opened and delivered with a

Crochet.

I before took notice (from Pag. 44 to 51) of the dangerous Practice of fuffering the Woman to remain undelivered after a Flooding once begins; I likewife shewed the Inconveniences that attend too early a Difcharge of the Waters, whence the Practice of breaking the Membranes before every Thing be ready for immediate Delivery, must be bad.

You impute the Faintings and Convulsions to be

owing to the fudden Removal of the Compressure or Resistance of the Flux of Blood downwards.

when a Woman is delivered of the Child and Placenta, the one immediately after the other; which is sometimes certainly the Case: To prevent which Inconvenience, you advise to deliver the Woman gradatim; that is, to break the Membranes, that by the Discharge of the Waters the Womb may be less extended; and in this Condition you leave Things, you fay, for a few Minutes; and if the Flooding is stopped. or even diminished, you let the Child remain in the Uterus perhaps ten or fifteen Minutes longer, and then deliver the Woman of the Child; and if the Hamorrhage be flay'd, leave the Placenta to be expelled by Nature.

Whoever understands the true Fabric of the Uterus and Placenta, and their Use, both from the best Authorities in my Treatise or Midwifery (k), will soon be

ation of basing the Child torner (k) Sect. 6, 7, 8, 9, 19, 11, 12, 17, 18, 19, 24, to 33, inclusive. CON-

convinced, that when once there is a Separation of the Placenta from the Uterus, the Flooding will never stop until the whole Contents of the Uterus are discharged; and be more or lefs, cæteris paribus, in Proportion to the Quantity of the Surface of the Placenta fo feparated; and will fometimes continue even after the Placents is expelled; especially if the Womb be too much weakened; and the less the contractile Force of the Womb is, caeteris paribus, the more the Woman will flood: All which is confirmed by daily Experience. And you tell us, ' Phat Floodings after Delivery are occasioned by every Thing that hinders the emptied Uterus from contracting, such as great Weakness and Lassitude, in Confequence of repeated Floodings before Delivery; the sudden evacuation of the Uterus; fometimes, the feldom, from Part of the Placenta's being left in the Womb. Whence it is very evident, that the Woman in fuch a Cafe should be delivered as foon as possible she can with Safety; without any waiting for an imaginary Stoppage of the Hæmmorhage, which can never happen till some time after the Woman has been delivered of both Child and Placenta. The bad Consequences of a large Oterine Discharge of Blood, or of seaving either the After-birth or any Part thereof, I have fet forth at large in my Estay (m). Whence it is very evident, that, fift, The Woman by your Method must lose more Blood than if the was delivered immediately after you had turned the Child; by which she must be more enfeebled; and the weaker State she is reduced to, before Delivery, the longer, cæteris paribus, the Uterus will be in contracting to its proper Size; and the longer that is performing, cæteris paribus, the more Blood fine loses; whence the Foundation of several Diforders may take their Rife, which may require a long Time, if ever, to be totally removed.

Secondly, After the Woman has undergone the Operation of having the Child turned in the Womb,

could the linked of the Woman, will food

<sup>(</sup>m) On Midwifery, Sect. 151, 155, 156, 157, 158.

it must be easier and less painful to her to be delivered immediately, than for the Operator to wait a few Minutes with his Hand in the Uterus; or to withdraw his Hand and stay perhaps ten or sisteen Minutes longer, and then to introduce his Hand again to finish what he had lest undone: And if he was to continue his Hand in the Uterus, it would be greatly compressed and cramped, which might delay the Operation, as well as put the Woman to more Pain by the Operator being obliged to change Hands.

Sect. 33. All these Dangers you advise your Readers to bring the Woman into, in order to avoid bringing on Faintings and Convolsions, to anticipate which fatal Symptoms, you direct a Method to be taken, which if put in Practice, will be ineffectual, or however not so sufficient as another Method; and in the next Place is so very painful, that the Woman can't

bear it; as I before remarked.

For whoever will consider, that the inferior Parts of the Woman are supplied with Blood that passes through the descending Aorta; and knows the Part of the Woman along which that Artery runs, and where it divides, will easily see that the Method of an Assistant's pressing upon the Belly cannot hinder the Descent of the Blood, because that Force is applied to only a Part of the Abdomen; where the Patient can't bear such a Pressure as is necessary to hinder the Descent of Blood, especially before she is delivered; and the Uterus may be so crushed betwint the Child and Assistant's Hands, where great Force is used (supposing the Woman could bear it) that there would be no small Danger of an Instantian of the Womb after Delivery, which may prove fatal to her.

Whoever likewise considers, that it is the Resisting of the Blood in the descending Aorta, which is abated by delivering the Woman, that is the Cause of these Blainteings, as mentioned in my Essay (n), and that the Pressure of an extended Uterus is near equal in Circums ference around the Inside of the Woman, will soon

be convinced, that an equal-contracting-external Application, will come the nearest to that of Nature, and will be less painful to the Patient; and consequently will be most effectual; and that is done by a Bandage or Girdle, as I have recommended in my Esfay; which is confirmed by La Motte (0), who fays, 'That the Midwife, in order to preferve or regain a fine Shape after Lying-in, had made a tight Bandage about the Patient; whose Lochia Ropt almost entirely; but the Bandage being removed, the Fever abated confiderably in a very little Time, and the Lochia came down better, and she got well in a few Days." Whence the Reader may judge of the Effect of fuch a Girdle, that makes an equal Pressure on the Outside of the Abdomen; and by contracting the internal Cavity, makes the Pressure more equal amongst the Viscera, by which too quick a Descent of the Blood thro' the Aorta Descendens, is prevented in the same Manner. as when a Person is tapped for an Ascites. These Girdles I order to be made with Straps, fo that they may be made to draw closer, as the Resistance from within abates; whence a due Equilibrium is kept up betwirt the Vessels above and below the Heart. By which means the great Danger from the sudden emptying of the Uterus and Belly, are guarded against more effectually and with less Pain and Danger to the Patient, than by your Method.

In the next Place you say after all this, If the Hamorrhage be stayed, you leave the Placenta to be expelled by Nature; which I must observe is such a Method of Practice, as no judicious Operator would ever be guilty of: For, as you have stated the Case, the Placenta must have either wholly or mostly be separated from the Uterus; wherefore the Discharge of Blood must continue as long as the Placenta remains in the Womb; by which the Patient must grow weaker and weaker, and the Hæmorrhage will still

<sup>(</sup>o) Cap. 8. Obf. 382.

be increased by the Pains which must remain, or return in order to expel the After birth. So that the Woman must suffer every way more than if the Operator had extracted that Substance immediately after the Birth of the Child; which in this Case is the more requisite, as the Woman must have been weakened before. Hence again it is evident, your Method of Practice is not so unexceptionable as your Eccho, the Review Writer, informs us, Numb. 3.

I come now to your third Class of præternatural Labours, in which you give Directions how the Child

in the Uterus is to be turned.

Sect. 34. You fay (p), 'The Hand of the Operator' being introduced into the Uterus, if he finds the Breech to be higher than the upper Part of the Child, or equal with them, he must try to turn the Head and Shoulders to the Fundus, and the Breech down-wards, by pushing up the first and pulling down the

You told us (a). That as the Waters are discharging, the Uterus contracts and squeezes down the Fatus. So that whenever an Operator attempts to push up the Head and Shoulders, the contractile Force of the Womb will repel or prefs down the Head and Shoulders again as the Operator withdraws his Hand; which you also acknowledge (r) in several Places. And this will be done with the greater Force, the less Quantity of Waters there were, and the longer, cateris paribus, they have been discharged. Wherefore this Method of pushing up the Head and Shoulders is not only very often a fruitless Attempt, but is constantly a painful Operation to the Patient, and more fatiguing to the Accoucheur. For in this Cafe, not only the Child's Head and Shoulders are to be pushed up, but also the Operator's Hand must go up to the Fundus Uteri, whereby the Womb will be extended much more than the Bulk of the Child will

<sup>(</sup>p) P. 341. (q) P. 337. (r) P. 341, 352. require;

require, whence the Woman not only endures more Pan, but is in Danger of having the Womb bark; because it will not easily be fe-extended, as any Perfon may foon be convinced of, if he knows the true Mechanism of the human Uterus, as far as has already been discovered; and confiders how it is differided during Pregnancy. Por then he will find that it is not extended as a Bladder, of any other fuch membranous Substance, by Wind, Water, or other Matter propelling or preffing outwards from within the Cavity; but is partly extended by the Growth of the Child, &c. and partly by the Blood diffending the Veffels and Sinuses in the Substance of the Womb, as the extending Force within is gradually increased; whence they bear a fort of Proportion betwixt each other, which cannot happen when the Womb is fuddenly diftended (as it may be properly faid to be, when extended by an Operator's Hand, in Comparison to the slow Progress of Nature during Pregnancy) wherefore there is the greater Danger of burfting the Womb: A Misfortune, I fear, that more frequently happens than fome are aware of Whence it is very evident, that the re-extention of the Womb by an Operator thould be avoided, as much as possible; and if attempted, should be done in the most carrious Manner: And when he does extend it, or turn the Child in the Womb, he should do it towards one Side of the Woman, and not towards the fore or back Part; because these last are more rigid than the Sides of the Womb, whence they will not yield fo eatily, and will be fooner burft; for we find the Uterus returns to its former Shape, which is flat and not round; but it would be of the last Form if it was equally rigid every way. This nepeffary Caution I never remember to have met with in any Author.

Sect. 35. This Method of pushing up the Head and Bhoulders of the Child to the Fundus Uteri, as recommended by you, not only extends the Womb, by the Addition of the Operator's Hand and Arm, but also

by turning the Child, in foch a Manner, as to take up a greater Space; and confequently differeds the Womb more, than when it is in a rounder Form; whence the Child cannot be so easily turned as when only pulled by the Feet. This is evident to any Person who knows that the Vertebræ of the Neck, Back, and Loins of a Child, are so formed by Nature, that they can't be bent backwards, without the Hazard of breaking off their Spines; and doing great Injury to the Child; whereas they may be bent so far forwards, as almost to form a Semicirle from the Crown of the Head to the Breech, without any Prejudice to the Child at all.

Let him also consider, that when the Breech is below, or equal with the Head and Shoulders, or even higher, unless the Head presents and the Breech be quite at the Fundus Uteri, that then the Child is in a roundish Form, as you observed (s), having the Chin frongly pressed against its Breast; and therefore when the Operator pulls at the Feet, it is easier moved about in that Form, without extending the Womb any way materially. But the very Reverse is the Cale, when you attempt to pufb up the Head and Shoulders to the Fundus; for then you lengthen the Spine from the Neck to the Sacrum, by which the Child's Head and Breech are at a greater Diftance, whence not only the Womb is more extended than by the other Method, but the Operator must consequently use greater Force; and the Child must also suffer by having an Application made to it contrary to what Nature intended, by bending the Vertebræ more backwards. Wherefore there is no Occasion for the Operator ever to push his Hand higher into the Womb, than to fetch the Peet when the Child is to be turned, or to terment the Weman by pulling up the Head, except in that Cafe which will be mentioned presently, Sect. 26?

By your Method the Os Externum must be overfiretched, if not lacerated, for you say, (\*). That

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mended by you, not only extends the Would.

the Operator must continue this Method of pulling

apland pulling down, until the Head and Shoulders

are raised to the Fundus Uteri; for should he leave

Child is extracted as far as the Breech, & From whence it is evident, that if the Hand be so high up in the Uterus as to push up the Hand and Shoulders of the Child to the Fundus Uteri, while the Child is extrasted as far as the Breech, then both this last Part and the Operator's Arm must be in the Os Externum at the same Time, whereby that Part must be over-stretched, and in great Danger of a Laceration; while at the same Time, the Arm must render the Descent of the Child more difficult.

In the next Place you say, Although the Child is extracted as far as the Breech, the Head is sometimes

o preffed down and engaged with the Body in the Paffage, that it can't be brought farther down with-

out being tore along with the Crochet.

Whoever understands the Mechanism and Bulk of of a Child, the Size and Shape of the Pelvis, and the Laws of Mechanics, will eafily fee that this Cafe can never bappen. For suppose the Child be extracted as far as the Breech (as you have stated the Case) the Distance betwixt the lower and upper Part of the Os Pubis being, as you tell us (u), only two Inches, if the Head be pressed down and engaged with the Body in the Passage, it must be advanced within two Inches. at most, of the Breech, and confequently must be within the Pelvis at the same Time the Body is there. And how far a Child is capable of being fo bent double, or how fuch Means of doing it are to be found in the Uterus, I leave you to prove, for to me it feems impossible, as I believe it must to every Person, who knows the Dimensions of the Pelvis, the Size of the Child's Head, and the Bulk of its Body and Hips, as related by yourfelf: The wideft Part of

the first you make to be only five Inches and a Quar ter (w) How then can the Head be ingaged with the Body in fo fmall a Paffager Una bourd and or ball an area

You have directed that the Operator should pull up and pull down, before he applies a Noofe on one of both of the Child's Feet ; but that is no easy Matter to do with only one Hand introduced into the Wonth : for when he removes his Hand from the Part puffied up, the Uterus will force it down again, before he can take hold of the Part to be pulled at , whence the poor Patient will be tormented very much to no manner of Purpole. I diseased y kein excalleng ob min beingenft

Sect. 36. Whenever the Child's Thighs, Legs and Feet, either come down parallel to its Body and Head, or are brought to by the Operator, then indeed was he to pull only by the Feet, he would jam the Flead fafter against the Brim of the Pelvis, to the Destruction or great Prejudice of the Child: But in fuch a Cafe the Operator having fixed a Nooferound the Legs, can pull with one Hand while with the other he pushes up the Head and Shoulders to bring down the Breech; but then he should push up with one Hand and at the same Time pull down with the other; by which double Purchase, you say (x), the Child may be turned even in the most difficult Cases.

I think you have not sufficiently directed the Method how the Head is to be pushed up; for the Operator is not to attempt to push up the Head and Shoulders in a ftreight Line towards the Fundus, by which feveral Mischiefs might ensue, but should do it in such a Manner as to keep the Child in as round a Form as possible: Which (if it can be done, as generally it may) is to be perform'd by preffing the Child's Chin very firongly against its Breast, to keep it as near the proper Form as possible; and at the fame Time to thrust up against the Fore-part of the Shoulders, and gradually move them towards one Side of the Woman.

of the Belvis, while with the other, the Operator pulls at the Feet or Fillet that is about them, by which Means the Child will then be easily turned, without pushing any higher. This is evident to any Person, ever so little conversant in Mechanics; the Consideration of which, you say (y), is in no Case more useful than when the Child mast be turned and delivered by the Feet; because there we are principally to regard the Contraction of the Uterus, the Position of the Child, and the Method of moving a Body confined in such a manner; which indeed may be as clearly demonstrated as any Proposition in Euclid, and therefore in all the Cases, where you have advised to push up the Head and Shoulders to the Fundus Uteri, you must be wrong.

In the next Place you take up fome Time (z) in giving Directions how the Fillet is to be fixed about the Legs, whereas it may be very easily done by a Whalebone, as I before directed in fixing the Fillet about the Neck of the Child, as I have improved it.

Sect. 37. You say (a), ! If the Shoulder (when the Arm is out) is forced into the Vagina, and Part of it appears on the Outside of the Os Externum, a vast Force is required to return it into the Uterus; because in this Case, the Shoulder, Part of the Ribs, Breast and Side, are already pulled out of the Uterus, which must be extended so, as not only to receive them again, but also to admit the Hand and Arm of the Accoucheur.

I must observe, that as the Child lies near, if not quite across the Womb, there is not so much Difficulty in returning the Shoulder into the Uterus, as when the Body of the Child is more parallel to that of its Mother's; and that, in this Case, the Operator has seldom Occasion to introduce his Arm into the Womb, because the Child's Feet may generally be got to by only introducing the Hand.

You then proceed, If this Differtion cannot posfibly be effected, he must flide his Fingers to the Neck of the Child, and with the Sciffars divide the Head from the Body; then deliver first the separated Head, or bring along the Body by pulling at the Arm; or if need be, with the Affistance of the Crochet: After the Body is delivered, the Head must be extracted according to the Rules that will be laid down in Sect. 5, p. 365.

If the Shoulder appears on the Outside of the Os Externum, and if Part of the Ribs, Breast and Side of the Child are already pulled out of the Uterus, and cannot be returned, the upper Part of the Shoulder will be pressed with such Force against one Part of the Pelvis, in which likewise are Part of the Ribs, Breast, and Side of the Child, that the Operator cannot slide his Fingers to its Neck, to guide and prevent that dangerous Instrument, the Scissars, from injuring the Mother; especially as they must be several Times opened and shut whilethey are strongly pressed betwint the Mother and the Child; and you suppose the last so fixed as not to be forced up again; and after all, the Scissars will not easily separate the Vertebræ of the Neck.

In the next Place, after the Head is separated, you order it to be first delivered, but you have not told us by what Means: For my own Part, I am at no small Loss to find which way it is possible to be done. especially according to your Method of delivering the Head when separated from the Body, as directed in Sect. 5. of your Book, and in Sect 21. and 41. of this Letter. Because in the first Place, you can't get to hold the Head fast, without introducing the Hand, and, perhaps, Part of your Arm also into the Womb; which can't be done after, when it could not be done before the Head was separated from the Body : For the Womb still closely embraces the Child; and the Separation of the Head can't remove the Shoulder, Part of the Ribs, Breast, &c. and Side of the Child, which were already pulled out of the Uterus. Hence your Instruc-

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tions are not only very deficient in this Point, but very Child, would in be left fabigating, to the trainest paodo

Modery surrow, or the Head too large to nurt, (that legited being the Child away by the Feet) when the Funis descends with it, we ought to try if we can si putfibly raise the Head for as to reduce the Funis sidoon by and after that let the Labour go on too ad

If the Head be for large, or the Pelvis fo narrow, ther the Child can't be extracted by the Operator's Strength added to that of the Mother, how must her Efforts alone bring it away; and that too, perhaps, after the Child's Brain has been fo long compressed, that it is either born dead, or dies foon after in Con-Sulfions to about 1 to an entry of the transfer of the child

In the next Page you fay, " Were it practicable at at all Times to bring the Head into the right Pofistion (when misplaced) a great deal of Farigue would d be faved to the Operator, much Pain to the Woman, and imminent Danger to the Child.

In this fmall Paragraph you have laid down three Politions, which I believe no experienced Practitioner will ever allow you minimals and an array which out too

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First, the Operator, instead of saving a great deal of Parigue, would generally occasion a great deal more; by being obliged to turn the Child; long after the Waters are discharged, and the Uterus is contracted closely in an oblong manner, to the Child; which offers, as as you acknowledge (c) in the worft manner to be turned in the Westex presents. Besides, when the Operator's Hand is introduced to replace the Head, as you advise, is it less Fatigue to turn the Child then, than it would be to introduce the Hand again (perhaps fome Hours after) to turn the Child when the Userus must be more Apongly contracted Yound it they that allahadi al

But supposing after the Operator has replaced the Blead, and should wait in vain for the Birth of the Child and compained it become freet on cashe for that

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Child.

tions are not only very[15048] in this Point, but very

Child, would it be less fatiguing to the Patient to deliver, with your beloved Forceps added to what she had already undergone in replacing the Head, than if the Operator had turned the Ghild, while he had his Hand within the Uterus? But how much more must his Fatigue be increased; if he, after all, must be obliged to open the Head according to your Directions, and extract the Child with the Crochet?

The second Position is, I think, no better founded than the first: Because I have not only had it from a considerable Number of my own Patients, but also from many other Women, who always declared they endured less Pain when a Man-Midwise had turned the Child and brought it away by the Feet, than by waiting for, and enduring the repeated Efforts to bring forth the Child by the Pains alone; which must always be for a considerable Time; especially in such Cases as you particularly recommend it, as when the Head is too large, or the Pelvis is too strait.

Thirdly, The Danger is not so great to the Child as you would infinuate, as I have fully demonstrated (d); for the Head will be less compressed by the Bones of the Pelvis when the Child is turned, than with the Forceps betwixt them and the Head; and likewise the imminent Danger of a long and great Compressure

upon the Brain is hereby avoided.

You before endeavoured to prevail upon your Readers to use the Forceps, in Cases that were proper for other Methods; and here you endeavour to make Cases for their more frequent Use: Which your Affectation for differing from other People, and your Bigottry for introducing your favourite Forceps, has drawn you into.

In the same Page you say, When the Head is in the Uterus, if the Child is not large, nor the Pelvis narrow, it were Pity to desist from the turning the Child and bringing it by the Feet; because in that Case he may be pretty certain of saving it.

(d) Sect. 2, 3, 4.

Will not a Child have a better Chance to be born folely by the Efforts of the Mother, when the Head is replaced, if it be neither large nor the Pelvis narrow, than when the first is too large and the last too narrow? And if it fatigues the Woman fo much, in the Cafe above mentioned, to undergo the Operation of turning the Child, will not the fame Operation, caeteris paribus, occasion the fame Pain, in either Case? If the replacing the Head be fo much less Fatigue than turning the Child, why do you recommend the latter, when the Head is neither large nor the Pelvis narrow? in which State a few Efforts of the Mother alone will expel it? But you acknowledge afterwards (e), 'That we cannot promife Success after the Head is brought in and when once the Operator's Hand is in the Uterus, he ought not to run fuch Rifks; especially as after all be might turn the Child with less Advantage; or have Recourse to opening the Child's Head and ex-tracting with the Crochet. So that you take a great deal of Pains to prevail upon your Readers to follow one Method; and then, foon after, advise them not to run fuch Rifks; which is a great Proof of the Clearness and Perspicuity of your Instructions.

Sect. 39. You direct (f), When the Legs or Brocch

of the Child are brought down, and if it is detained by the Size of the Belly, let the Belly be opened, by forcing into it the Points of the Sciffars; or the Operator may tear it open with the sharp Crochet?

To perform this Operation, either Ould's Terebra Occulta, or my Extractor, are much fafer, and confequently more proper Instruments than either the naked Sciffars or foarp Crochet, for the Introduction of either of thole last, betwixt the Os Externum and Child. when its Breech is brought down into that Orifice, is not to fafe, because their Points are not guarded by any Canula or Capfula, but are quite bare. That sel the Cerepathania aright belying mare account them an

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beaution.

You then fay, If the Body and Arms of the Child are extracted, and the Head is detained by being naturally too large, over officed, or dropfical, or from the Narrowness and Distortion of the Pelvist 9 if the Child be alive the Forceps ought to be tried a but if it be impracticable to deliver the Head, to as to fave the Life of the Child, he mult, according to forme, force the Points of the Scillars thro the For ramen Magnum; then dilate the Blades, to as to enlarge the Opening, and introduce the blunt of harp Hook. Some recommend an Instrument to perforate the Skull, with double Points curved and joined together; which, when pulhed into the Foramen, are separated and take hold on the Inside but as the opening with the Sciffars and introducing the blunt Hook, as above, will answer the same End, it is needless to multiply Instruments, especially as this Method is not fo certain as the following:

In my Remarks upon this Paragraph I shall shew the Difficulty, nay, I may fay, the Impossibility of putting your Directions, as above, into Practice. For whoever will consider the Connection betwire the Head and Vertebræ of the Neck, will find it is no easy Matter to make an Orifice large enough thro' the Skin and Mufcles of the Back of the Neck to let out the Contents of the Cranium, fo as to lessen the Bulk of the Head, by only the Points of the Sciffars. And if he confiders also the Hardness of the occipital Bone, he will find all the Strength of the Operator applied to the End of the Sciffars cannot possibly dilate the Foramen Magnum, after they have been introduced therein, especially if the Head be over offified; for this Bone will bear the same Proportion of Hardness as the rest. Nature has made this Bone the strongest and to move the least of any of the Cranium that have Sutures, that the Cerebellum might be the more fecure from any external Compressure. But supp ssing this Opening to be made, here is yet another Instrument to be introduced

produced into the Skull after the Sciffars are withdrawn, which is will be no easy Matter to accomplish, as is evident to any Person who knows the Size and Rorm of your Blust Hook. And in the next Place, supposing it also introduced, yet as the Hook will be applied only to one Side of the Orifice, the Head must, in other. Whereas the Piercer of my Extractor, having a fharp Edge on each Side, cuts a free Poffage thro Skin and Mulcles of the Neck to the Foramen goum, and when introduced therein, draws the Head in the Center of the Passage, or in such Man-ner as the Operator pleases, because it has firm Hold on both Sides of the Opening; and my Instrument is of the same Time introduced at once. Above you have given your Reasons why my Extractor should not be used : Firth Because it is needless to multiply Infirmments: Secondly, Because another Method is more centain.

The First I have already thewn, what you offered, Seet, 29. n. 3. to be a very weak Argument, and would have held equally good against the Use of your favourise Instrument, the Forceps; supposing it to be true in Fact. But I proved there, that my Extractor did the Use of two, if not of three, of your instruments; as it does of two of the fame fort, in this last mentioned Cafe, and that also with more Ease and Safety to all Parties, I come therefore in the next Place to examine into the other Method which you fay is more more certain than mine; but shall first observe, that in the Cafe above mentioned, you direct that if the Child's Belly was not opened, and it is found alive, the Forceps ought to be tried; altho the Head is too large, over offified on deorfical, or the Pelvis too narrow or differted, to all which I have fully spoken already.

Tou fay (g), If, notwithstanding these Endearecours, the Head cannot be extracted, then the Opeexternal Comparties. But lups links tog Opening

rator is first to Introduce his Hand along the Head, and his Fingers thro, the Os Uteri. But if I can understand your Rook, the Child's Head must have been in the Vagina, and consequently must have passed the Os Uteri; because, when these Methods have failed, and you are obliged to separate the Child's Head and Body, you say (h), the Operator must push up the Head into the Uterus; which, I humbly presume, implies that you suppose it to have been entracted before; and in that Case, your Method of introducing your Fingers thro, the Os Uteri is needless, on one Hand; and if the Child be not in the Uterus, your Instructions to push it into the Uterus again are wrong; But to re-

Your second Operation is, 'To slide up one of the curved Crotchets along the Ear betwint the Hand and the Child's Head, upon the upper Part of which

sit must be fixed; it som admit contributed basisen

and the Instrument be to be sided between it and the Operator's Hand, then the Wrist or Part of his Arm must be in the Os Externum at the same Time that the Neck of the Child is in that Place; and what Injury may thereby be done to the poor Woman, I'll

leave the judicious Reader to determine.

Your third Operation is, To withdraw the Hand, take Hold of the Instrument with one Hand, turning the Curve of it over the Forehead; and lastly, with the other, you grasp the Neck and Shoulders, and pull along. By which, in some Cases, you imagine the Head may be extracted; because, you fay, The Crotchet being thus fixed on the upper Part, where the Bones are thin and yielding, makes a large Opening thro' which the Contents of the Skull are emptied, the Head collapsing is with more Certainty extracted, and the Instrument hath a firm Hold to the last, at the Forehead, Os Petrosom,

and Balis of the Skull? But I mult observe to you. That as the Forebead is a Piece of the upper Part of the Head where the Bones are thin and yielding. the Crochet cannot bave a firm Hold to the last at that Part . And how it can get a firm Hold at the Os Petrofum and Basis of the Skull, without injuring the Woman, is to me not very clear; fince is was fixed at the upper Part of the Head. So that the Bones and Integuments of one Side of the Cranium must give way before the End of the Crochet can get fuch Hold in the last Part mentioned; and as there is not a Hand to defend the Edges of the Bones from cutting the Woman, the may thence receive an incurable Wound. Moreover, if any Hold be to be taken on the Os Petrofurnor Basis of the Skull, which must not be far from the Os Externum; as the Shoulders are on the Outlide of that Orifice, the streight Crochet is better than the crooked fort; because the more it is curved the more it must overstretch the Pudenda. For the Use of the Curviture is intended to answer to the Shape of the Head, while the Bow-Part lies close to the Sides thereof Belides, you have not cleared up how this Hold at the Os Petrofum and Basis of the Skull is to be obtained; and if it was to fixed, it will turn the Head from the Center of the Passage to one Side.

Sect. so. After these four Operations have failed of Success, you then say (i), If one Crochet be found insufficient; in the fifth Place, let the Operator introduce his Hand as before; and fixthly, put up and fix the other along the opposite Side; then, seventhly, he must withdraw his Hand and Lock and join the Crochets; and, lastly, he must pull along, moving and turning the Head, so as to human the Shape of the Pelvis.

these Crochets made, they cannot yield at all, and therefore must prevent the Bones of the Head from

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collapsing and moulding themselves conformable to the Shape of the Pelvis. And I must also add, that it is not the upper Part of the Head that hinders the Extraction of ir, but the Basis and Occiput which are the sirmest Parts, and to the Bulk of which the Crochets make no small Addition.

Sect. 41. You then tell us (k), \* That if all the eight preceding Operations should fail, by reason of the extraordinary Offication or Size of the Head, or hithe Narrowness and Distortion of the Pelvis, after Mhaving used the Crochet without Success, the Opes tator must separate the Body from the Head withou Biftory or Pair of Sciffars; which may be called the ninth Operation; then, tenthly, Pushing up the Head into the Uterus, (which, as I observed, Sect 39. thews it must have once been out of it) turn the Face to the Fundus, and the Vertex down to the Os In-4 ternum and Brim of the Pelvis; then, in the eleventh Place, direct an Affiftant to prefs upon the Woman's Belly with both Hands, in order to keep the Uterus and Head firm in that Position; then open the Skull 5 with the Sciffars, deftroy the Structure of the Brain. which is the 12th Operation, and 13thly, He must sextract with the Crochets, as directed in Chap. in. 9 Sect. 5. Pag. 297. midd sloup to range I was it

As you have here ordered the Child's Skull to be opened with the Soissars, the Structure of the Brain to be destroyed, and the Head to be entracted, as in Chap! iii. Sect. 5. it is not only proper, but absolutely necessary, to look a little into Sect 21, wherein I have made some Remarks upon that Part of your Practice, to which I refer, to avoid Repetitions; and then the Reader will be sensible, first, that an Assistant pressing upon the Belly, as above directed, or as is hereaster mentioned by you (1), cannot answer the End proposed; because the Head cannot possibly be held firm enough till the Ends of the Seissars can be pushed, either theo the Survey or

fill they make their Way thre the felid Bones by boreing (m) a because the Head will move round upon the least oblique Application, by thrusting against it; and what is there to keep the Head steady while the Oriige is dilated by the Scillars?

Secondly, The Manner of destroying the Structure of the Brain, by opening and turning the Scissars and thurting their Handles with each Hand, would also

turn the Head-round at the same Time.

Thirdly, The Introduction of the Crocher into the Orifice made by the Sciffers, will be more Difficult than while the Head was fixed to the Child's Body.

Sect. 42. You say (n), 'That when the Child hath been dead for many Days, and the Body much mortified, an expert Accoucheur may leave the Head bebind, even though he has used all the necessary Precaucions. In such a Case, provided the Head is not very large, nor the Pelvis narrow, and the Forehead is towards the Sacrum, let him flide up his Hand along the Back-part of the Pelvis, and introducing two Fingers into the Mouth, with the Thumb below the Chin, try to pull the Forehead into the Hollow of the Sacrum. If the Head is small it will come along; if any Fragment of the Neck remains, or any Part of the loose Skin, he may lay hold of it, and affift Delivery, by pulling at it with his other Hand: If the Head is low down, it may be ex-

In the first Place, I think, an expert Accoucheur will never leave the Head behind, when that Part is not very large, nor the Pelvis narrow, as you have stated the Cafe: for certainly if the Child bas been dead for many Days, fuch an Operator as you mention would caffer extract the Head while it adhered to the Body by all the Articulations of the Vertebræ, Muscles and Skin of the Neck, especially as a skilful Artist, if he found the least Obstacle to us easy Exit, would introduce a Finger into the Mouth of the dead Child, to affift the other Hand in deswing is forwards. And, fecondly, if these Parts are so much mortified, as to leave the Head behind, ofter all the necessary Precautions base been used white the Head was small, why then should you put your Pupils upon a vain Attempt to deliver the Woman, fince the may fuffer to much Pain and Mi-fery by fach a fruitles Method of Practice? For when the Strength of the Vertebrae, Muicles, Skin of the Neck, and the Operator's Finger in the Child's Month cannot prevent the Separation of the Head from the Body, how can the fingle Articulation of the lower Jaw alone, or even when affified by any Fragments of the Neck or Parts of loofe Skin, bear a fufficient Force to bring out the Head, fince it could not be delivered by the Means above-mentioned, when fo much greater Force might be applied? And if those Parts first menrioned were fo much mortified by the Child's being dead many Days, must not the Chin, any Fragment of the Neck, or Part of the loofe Skin, bear the fame Degree of Corruption? But in following these Directions, here is a Difficulty you don't feem to clear up; for as you have put the Case, the Head is at or above the Brim of the Pelvis, or elfe it can't flick at the Jetting-in of the Sacrum; in which Cafe, while one Hand is imployed in taking bold of the Chin, how must the Operator lay hold of any Fragment of the Neck or loof Skin with the other? For such Fragment will be, at nearest, in the Vagina; fo that, to perform this Operation, the Person must have one Hand in the Pelvis, and all or the chief Part of the other there also; which must give a great deal of nunecessary Pain to the Woman, and will endanger a Laceration of the Perinacom.

In the next Place you say, If the Head is low down, it may be extracted by the Forceps. I can't proceed without observing, that you still are for using your beloved Forceps upon all possible Occasions, whether it be the properest Method or not. Your Pretence be-

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fore for dling that Instrument (6), was to preserve the Life of the Chital which Reason can have no Force here therefore, as the Panent may be injured there. by as is proved in Sect. 9: why are those Risks to be run, when other fafer Methods can be taken, as will prefently appear al base hosposide salignations to the

After the Operator has introduced one Hand into Pelvis, (nay, perhaps both) and made the fruitless Attempt, above-mentioned, and also used the Forceps in vain, which are to be introduced in the fame Manner as before directed; then you order the Operator (p), To push up his Hand along the Side of the Head, dittil traffall have paffed the Os Internum; which at least may be faid to be fourth Operation: Thew, fifthly, "With the other Hand let him introduce one of the curved Crochets, and fix it upon the upper Part of the Head; and, fixthly, Withdrawing the Hand which was introduced, take hold on the Inftrument; and, Seventhly, Sliding the Fingers of the other Hand into the Mouth, he must, in the last Place, pull down with both, as above directed, by which termay be brought along, even in a narrow Pelvis. Paging and 188 Mindi. 2018 9 2018 ing cashid 2010

Whoever knows the Fabric of a Child's Head, and how the respective Parts can yield, will soon be convinced that bringing the Balis of the Head fielt, will do more Injury to the Mother than when the Apex is placed as Nature directs in a regular Birth; and as the Child here is dead, the Reasons for bringing the Balis first, as mentioned before, Sect. 2. No 3. do no longer sublist, wherefore the Operator having a Hand in the Uterus, should rather turn the Apex to bring the Head out in the casiest Manner: In which it might be greatly affifted by the Firm Hold of the crooked Crochet at the Bahs of the Skull, Reeping the Apex Ready by the Fingers of one Hand. photos Porception all pomble vicinius, dienter

1 majord 20(0) P.248.0 b(p) P. 367, agong of 10 1 P 460, (1) Seft, 18.

Xourthen proceed (x), i But if it cannot be moved, even by this Expedient. The Operator must, in t ninth Places 'introduce the other Crochet along th other Side of the Head, and fixing it upon the Sk I lock them together an aud tentaly, withdraw the Hand that was introduced, and, lastly, extract it as

when delivering with a Forgeps system and A

If one Side of the Crochet, affifted by one Hand, can extract the Head, even in a nerrow Pelvis, you must suppose, in this last Case, either that the Head must be very large, much offified, or the Pelvis must be very narrow indeed; in all which Casses, the Injuries to be done to the Woman by the Forceps or Crochets will be increased; of which you feem to be convinced. when you say (s), 'If none of these Methods will succeed, on account of the Largeness of the Head, or the Narrowness of the Pelvis, then the Head must be

" opened. him your lines a part your rigitalist Here again your Instructions are very deficient; for you should have given your Pupils Directions how to know when the Head is too large and the Pelvis too narrow; which, in this Case, might be easily found out, because when the Hand is introduced into the Womb, the Operator, by following the Directions I have already given above (1), may eafily know whether the Pelvis be too narrow or the Head be too large or too much offified, in all which Cases the Head must be opened; whereby all the above-mentioned painful and dangerous Operations may be avoided. But even supposing the Knowledge of the Proportions of the Head and Pelvis could not be obtained, as the opening the Child's Head and extracting it when diminished. is so much fafer, more expeditious, and less painful to the Mother, when properly done; especially as it is, in the most difficult Cases, your dernier Resort, why did you not direct your Readers to follow the last Method?

When the Electric left alone in the Womb and eminer be extracted by any of the above mentioned West chods wild much be opened, you direct the Operator (a), to loude up the Head, and curning the upper Part downwards, order at Affiliant to prefe the Patient's Bello with both Hands, moving them from Side to

Side, and squezing in such a Direction, as will force the Head towards the Os Incomun, and retain it firmly in the Pettion; then it must be opened and extracted; seconding to the Directions given in Chapting Security Number 2: Pag. 299.

It is a biologically impossible for a Patient to bear such Pressure withour the greatest Milery and Pain, as I bed fore toole notice, Section 21. not with leanding your lrave recommended this Method of Practice in leveral Places (w). For after fich a tedious and bad Labour as above mentioned, flie'll not be able to bear, even the least Pressure without Pain; and if she could, the Method you propose will neither answer the End so cercainly, nor be is fafe as by the Operator's holding the fast in the proper Position, by the Hand that Is already introduced into the Womb, to puff it up and turn w right, as you direct, as I shall demonstrate pre-Meneral rice Opiciad a salarity and anti-proceditetinal

In the next Place, after a poor Patient has been tori mented by feven or eight different Operations, after the Body and Hend of the Child were separated, you put the Accouched upon torturing her with at least nine other Operations in opening and extracting the Head, as you direct in Chap. iii. Sect. 7. Numbi 2. Pagy 299. The Objections to which may be feen by looking back to Sect. 21. All thefe may be avoided by following the Directions with my Extractor, as given in my Effay (x). For when the Child's Head is left alone in the Womb, whether the Head be large or fmall, or the Pelvis narrow or wide, or the Child are marked by coice and foreign, and at the large [ 2001]

has been a long or fliore Time dead, the Operator multi-introduce his Mand, and querbase the Buliness, as div-rected before, Sect. no. 23, 25, where the Advantage tages of my Method are very apparents, whereby the Patient is delivered with more Ease. Sufair and Art pedition, I than by any other Method bitherto made public shart et mot rendt such hen and norried sitte seen Place (n) you loyels As greet a Difficulties may occur from Inflammations of the Pudenda Contraction of the Uterus. Slipperincle as Largencia of the Head and the Nationnels of the \* Pelvis, in will non be improper to inform the Read der of other Methods that appear to me weful parsticularly when the Parts are much contracted and a fivelled in Let the Hand be introduced into the Va-" gint, and if it cannot be admitted within the Uterus. "I the Fingers being infinuated, may move the Head." for as to raife the Face and Chin to the Fundus, the Vertex being turned to the Os Internum, and the Fordbead towards the Side of the Sacrum This being effected, let the Operator Ilide up along from Ear a Blade of the long Forceps, which are focurved to the Side a then, in the third Place, he must withdraw the Hand; and, fourthly, inmoduce the other; and fifthly, fend up the other Blade along the opposite Bar , when they are to be locked and, " in the next Place, the Pland is withdrawn, and the 16 Handles fecured with a Fillets he must in the feworth Place pull the Head as low as it will 5 come sthen putting the Forceps into the Hands of " an Affiltant, who will keep them in that Polition, files him make a large Opening with the Spillars, S Squeeza the Head with great Force and entract f flowly and by Degrees, and I be hard her hard Whoever oknows the Difficulty of introducing and fixing the Forceps as here directed, when the Paris are much contracted and swelled, and at the same Time

(1) P. 369.

factions

Opening to the Head with the height of making to share it is the Pinyasire and bleine and mad facilities and the horself of the fine constitution and mad facilities and the horself of the introduced found when increduced, how must the Operator open and thut them for as to make a large opening, especially when the Head is to closely squeezed by the Forces and Because his your Method of opening which the Scillars, the Orifice is enlarged by the factory bare prevented from yielding. Moreover, the ground the force of the Scillars of the Part is, the more Dangle there is of cutting and bruising the Moreover, the ground by the Fartan by the Scillars, whereby the Inflammation will be full entreased, as well as by the repeated introduction of which may be avoided without any great Danger, by the Hespelor, as is evident to every Person who duly would describe the fail above.

dered Leverer's Tire Tête more simple, convenient, and less expensive. And, in the last mentioned to Case, you first introduce along the Hand and turn down the Vertex, as above directed, then this instrument, with the three Sides joined together, must be introduced along your Hand to the upper Part of the Head, then let the Sides or Blades be opened to with the other Hand, so as to inclose the Head, and easy manner, that they may pass over the introduced and Uterus. When they are estably and length ways in a light placed at equal Distances from one another, let him and join the Handles, withdraw his Hand, and trying

(z) P. 371.

them:

when regether with a Fillewopull down opens and extraction directed aboves over the best structured of

Section are much stronger against the Method here proposed; because the Forceps has only two Sides and may be applied to the narrowest Part of the Head; whereas this Instrument extends the Parts in a more circular Form; and consequently more in some Places than the Bulk of the Head will require. For their Sides cannot yield, being of one determinate Diameter when opened; and therefore it is a very improper Instrument to be used where the Parts are much contrasted. Add to this, that it hinders the opening of the Head with the Seisfars more than the Forceps does

Having now finished my Remarks upon your Method of Practice in the various Sorts of Deliveries, I shall yet detain the Reader a little longer by making some few Observations on your Practice in some of the

Diforders subsequent to Delivery : " to be be livery !

Sect. un In Floodings after the Child is brought forth, you fay (a), As there is no Time to be loft, and internal Medicines cannot act to fuddenly as to manswer the Purpose, we must have immediate Recourse to external Application. If the Disorder be owing to Weakness, by which the Uterus is difabled from contracting itself, so that the Mouths of The Veffels are left open, or, though contracted a thirle vet not enough to restrain the Hemorrhage boof the thin Blood o Or if, in separating the Placenta. the Accoucheur has fearched or tore the inner Surin face or Membrane of the Womb, in these Cases, If fuch Things must be used as will assist the contractile 10 5 Power of the Uterus, and hinder the Blood from flowing to fast into it and the neighbouring Vessels: For this Purpoles Gloths dipped in any pold retringent Fluid, fuch as Oxycrate, or red Port Wine, " may be applied to the Back or Belly."

THE STATE OF

I thew'd in my Account of the Composition of the Uterus, that there is no such Membrane in the inner. Uterus, that there is no fuch Membrane in the inner Surface of the Weeks, that could, in any Condition, occanion a Plosting, he every Perfor convertant in Anatomy can tell. And any Man, even Practitioners of the lowest Chais, can tell you, that Referingents up bled to the Back and Beby, cannot influence the Uterus, because their Effects rately go deeper than the Cutis. How then can fuch an Application to the Places mentioned affect a Part throw to many Musicles and Bones that are no way contiguous to, nor has any Communication with the World, but in common with the reft of the Body & And cold emercal Applications to the of the Body And cold external Applications to all most any Part will often stop Perspiration and cause a total Suppression of the Luchia, whereby the Life of the Patient must be in infininent Danger. And you acknowledge (b), That the Symptoms are more dangerous when the Discharge is too finall or hath ceased altogether, than when it is too great." Therefore no Wethod fhould be taken that could exchange a les Evil for a greater of takes - (a) vel not value You then proceed (e), Some prescribe Venzesection in the Arm, to the Amount of five or fix Ounces, with a View of making a Revolution. If the Pulfe is strong, this may be proper; otherwise, it will do more Harm than Good! Others order Ligatures, for compressing the returning Veins at the Hams, Arms and Neck, to retain as much Blood as possible in the Extremities and Head. Belides thele Applications, the Vagina may be filled with Tow or Linnen Rags, dipped in the above mentioned Liquids, in which a Here Allum of Sacchar-Saturni hath been diffolved: Way, fome Practitioners inject Proof Spirits warnied, of loaking them up in a Rag or Spunge, introduce and fouceze them in the Uterus, in order to confiringe rentment at the by by the the the tellby sile mapping herapost or histored a rece greater Misfortune. and, in the End 104 (1) 1 11. This is evident is every Mian who knows the true Pabric of the Womb,

es above deleribed in the foreier Fait of this I ferer.

which

and the morning med the Latter of the Composition of the Liver mention their various Methods as Infructions to be followed, you are greatly millerding your Readers, and that the first is your intention is evident, be caule you give some Restrictions in regard to the Ve-Which shews that to be a Method you approve of and as you make no Objections to the other ways the Practice, it is a tacit Apprehation of them; for had you thought them wrong, you hould either not have mentioned them amongst what you thought to be right, or should have marked them out as so many Rocks to be avoided.

I am surprised to hear it mentioned, that the ridiculous Old wives Notions of Ligatures about the Hams, Arms, &c. can prevent a Flooding; fince most of the Sisterhood have been convinced by satal Experience, that it will never do any Service. For to preferve Life, the Circulation of the Bigod must be continued. and the Heart cannot propel or drive that Blood forwards, which never comes to it; and it is as evident,

that foch Ligatures cannot tellringe the Vellels of the Womb, which you suppose to be too much opened; and therefore let the Quantity of Blood be great or

imali, as long as it is a Fluid it will go qua data Paria.

The Introduction of Tow or Linnen-Rays into the Vagina, dipped as mentioned, will coagulate all the animal Fluids as far as their Effect can go; and therefore supposing it even to reach to the Fundus Uteri, it would coagulate all the Blood in the Sinules of the very Substance of the Womb, which it must do before it could reach the Arteries that fills them with Blood. And as the Orifices of those Sinuses that open into the Carity of the Uterus are much imaller than the Sinules themselves, the Blood to coagulated therein must be confined; and altho, by that means, the Hæmorrhage may be stopped or lessened; yet a greater Misfortune. and, in the End, as faral, will ensue. This is evident to every Man who knows the true Fabric of the Womb, as above described in the former Part of this Letter, which

ordi

which is even capable of ocular Demonstration. More-over, the plugging up the Vagina may stop and co-agulate the Blood that gets thither; but will not reach the Fundus Uteri, whence the greatest Quantity of that Fluid flows, and as Restringents are not vola-tile, their Effluvia cannot rise up higher than they are

WIEDIS

The fame Objection holds good both as to the injelling of Proof-Spirits, or introducing a Rag or Spunge loaked therein into the Uterus; Which, if accomplished, might indeed fooner do the Mischief: But the Introduction of a Spunge full of any Liquid into the Uterus will be no easy Matter for the Operator, and a very painful Operation to the Patient, who must suffer a great deal more than the could do by introducing a Hand to fetch the Placenta immediately after the Delivery of the Child; both because the Os Uteri must here be more contracted, and because the Operator's Hand must be more extended while it contains a Spunge loaked as above. Why are these Hazards to be run, if what you say in another Place be true (d)? For you tell us, that the Lochia seldom flow so violently as to determ the Patient of a sudden: But this Method, in many Cases, must be certain Death; and you acknowledge, that when the Discharge is too small, or hath ceated altogether, the Symptoms are more dangerous. Hence it appears that your Method is not fo unexceptionable as the Review Writer, Numb. 3. would make the

Sect 45. You tell us (e), That After Pains commonly happen when the fibrous Part of the Blood is retained in the Uterus or Vagina, and formed into large Clots. Is not, therefore, every Thing to be avoided which might increase the Bulk or Number of thele Clots? both which will be aggravated by your Method recommended in the last Section; whence the After-Pains will also be stronger; and, caeteris paribus, the shronger they are, the more will the Blood be pressed out of the Substance of the Womb; and you own (f) the squeezing the Aster-Pains make, provokes the Evacuation of the Lachia.

From what you direct the unexperienced Reader migh be apt to be milled, by imagining that After-Pains ma proceed from large Clots which are detained by the fudden Contraction of the Os Externum after the Placenta is delivered. Which I must observe to you can never occasion them; because the Clots are then near their Exit, and the Seat of the After Pains is in the Subflance of the Womb. For it is well known to every experienced and intelligent Accoucheur, that when the After-Pains have been very violent, upon the Introduction of his Hand there has been no Clors of Blood found in the Cavity of the Womb. But they are fro quently caused by grumous Blood lodged within the Sinufes in the Substance of the Wamb, as I have proved in my Ellay on the Theory and Practice of Midwifery (g) For I show'd, 5 That these Sinuses, in the ninth Month of Gravidation, are so large as to admit the End of the bigget Finger; and that their Orifices that open into the Cavity of the Womb, will at the fame Time admit the End of the little Finger. Whence the f anatomical Reader will easily conceive how the Arterial Blood, which is always more fibrous than that for the venal, may compose harder Clots than the venal Blood. He can also easily see, that upon the Expulsion of the Child and Placenta, the Orifices the opening into the Cavity of the Uterus must contract; whence he will foon perceive how this grumous Blood may be detained in the Sinufes, especially as they are always full while the Uterus is extended and the Placenta still adheres to it. Hence the Ule and Benefit of the After Pains is evident, which by , stimulating or compretting the Vessels and muscular A Fibres, make them exert their Porce to fqueeze cut

this gramous Blood, which otherways might remain every Withou ought to be avoided that might coagulate the Blood in those Sinuses, as I mentioned in the Tall Section. Hence we are naturally led to a Method of preventing or telleving their Complaints, by keepmg the Deeres a little while from contracting too fair in fuch People who have been Rebject to violent After-Pains in former Labours, which may be done by letting the Hand, that is within the Womb, remain a little Time there after the Child and Placenta are delivered. Which Method I found out accidentally, as is mentioned in my 27th and 28th Observation (b), being what I had never remembered to have met with nor heard of before in any Author. For by keeping the Womb from contracting too fast, the Blood in the Sinuses is more easily discharged or squeezed out thro' the Orinces, which in this Case cannot contract so Closely, nor so soon, as if the Uterus was quite empty. and the Uterus will be more early extended a little in this Cafe, and with less Danger, than when almost upon full Scretch while the Child was contained there-in. The Operator, by following that Method, and moving his Fift a little with a circular or rotacory Motion, will frequently perceive the Blood coming out of the Orifices of the Sinufes in the Form of Strings or small Closs, which are distinguishable betwitte his bingers and his Hand even after it is withdrawn from the Uterus; and fometimes as they come out he will feel them warmer upon the Pland than the Contents within the Cavity of the Womb. This Method has been followed with Success by many fince the Publication of my Esty, and by several others before that Time, upon my Recommendation; especially where Patients were delivered of dead Children, Hence also may be acand yellow bave After Pains of their finst Obild, or, however,

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nisofo duchas afterwards sibecaule in the firty Cale the so Gioules may not have so much Blood therein as in focuse the fold Bones, all the Stepeners of the Springer the

bornet Having new examined your Methods of Practice in Reader's Satisfaction, that there are others much preferable to those followed by your I have beg leave to recapitulate in a furnitary way, fuch Cafes in partientaritiwherein I make use of the Extractor in hydroglelf brand compare my Method of Practice may, and one View, fee which is the callest fafest, and mothexpedicious, both for the patient and Opepator if The Reafons ar larger pro and company be feen according to the Parts in this Book referred to. s more come of study I pull at the Ice me"

the Skulls. First Gafe. When the Child prefents with its Head, and can neither be delivered when turned, hor extracted whole, whether alive or deady its Head multibe open'd, and the Bulk thereof leffened, for the Security of the Mother's Life and Welfare. In this Cafe you order bas as follows, Sect. air and one suchood and Alder

1ft. That an Affiftant bollnthefame Cafe Seft. 22. press upon the Belly of the -outh lintroduceon Hand Patient, to keep the Child's (fuppose the Left) to reach

Operator to introduce his Thumbuor Finger fearch Hand and press two Fin- ford the fagittal Suture, gers against one of the Su- which I hold in the Con-

adly, To take his Sciffars, and guiding them by the Hand and Fingers till they reach the hairy Scalp into it. But if the Head

Head fleady. the Child's Head, which I ad readly, You direct the grasp therein, and with a tures of the Cranium. ter of the Paffarent St ods

adly, With the other Hand I take my Extractor and gently flide the upper End of the Capfula along of the Child, push them the Hand that is within the Vagina, till it reaches flips afide, in such a man- the above-named Surure orquistion, not very early to be personned.

ner as they cannot be pulled sinto which sides pulled ed into the Skull at the an addy ale expand the Survice bore a Hole thro' Wings, cand break other the folid Bones, till the Structure of the Brain there-Sciffer can be forced into with by maning the Inthe Head as fanas the Refts. I floument twice of thrice Then our arento are energy that farming softwhich Mo-

must withdraw the Hand whealt sensible states of the that was within the Vagina. She athly, I then withdraw of sthir. He must take the Last hand that held hold of the Handles of the the Head, placing the Ends Sciffars, with each Hand, w of the Fingers thereof on and pull them afunder, that the Outlide of the Cranium she Blades may dilate and against the Wing of the Exe make a large Opening in tractor; and then the the Skull :

thus, turned, and again Woman's which will be pulled afunder, fo as to cafily done if the fale Obmake the Incision (or ra- stacle to its Delivery was ther Tearing ) crucial. Then, and owing to the Bulk

7thly, The Sciffars are thereof: 3002 and loss again to be closed, and million to tad Tooks the Operator must intro- and to what the considered duce them even beyond stated advanced or scientific the Refts o When it and and any best best

Schly They must again ach population I will s be opened and turned half end spot of the total sound round from Side to Side, said award a section of to break the Structure of seeds to dead from a wante the Brain which being done, in the W when

oth Place. The Sciffars are again to be shut and withdrawn (2) Then

sthly, I pull at the In-6thly. They must be frament and deliver the

and much Division word the To take wishout and an including them by this and the least there will chartered and the chartered media of the character than with a tall bastothly.

<sup>(</sup>a) But if the Sciffars do not answer the End, Smellie introduces a Crotchet to destroy the Structure of the Brain, which is another Operation, not very easy to be performed.

Head will advance but if it requires more Force. then want mention on the

fmall End of the Blunt Hook [Sect. 25] into the placing the End of the on the Outlide of the Skull, pull with greater and greater Force , If this fails, then the hooden

along the Outlide, above to outline with stand or the under Jaw, and then sacisd noin mubiton alleds pull; but if that will not answer, in the me served and holder of mounts of the

the Hand, and fliding the and I have the live Fingers along the Head without the hour hand past the Os Uteri, in the

sorthly The Operator sillinged some beds as son must introduce his Right, water in Hand denier in much hand into the Vagina and would stock be being two Fingers into the Open- and this case of the Child, land, and the Confirm which being bear bear bearing on the confirmation of the confirmation on the Infide with the wasted on and about the Thumbulen white cake spilitude and the or where of the Opening, then, nois mone signal Brithla Michael rithly, Pull and de phase side Wat distribute liver the Woman, if the cution radio boundary say the office south of Wilder hold of old idealists londier. Sciffmac votor become trachet. m 12thly, Introduce the sand about many lad bus the Maltin oday chilway a gife make hadden Orbertale the Opening of the Skull, and anima on the trabacient secolly. They much be Pingers against the Point minus diadia Torride much pather Henris to fourth the per sa) nohobi was walke ther I agrifued distillar Torte Enterly schill to the conflared in the 13 rathly, Withdraw the this white delice wines Fingers, and flide them when I have be special along the Head palt the buoyah about mosts apply Os Uteri ; and, hart a ce es apaneve imeli land on rathly, Withdraw the rabina famous privides Point of the Hook from that the minimum to live the live of the Hook from the Opening; and flide it .able of and mail denon-

15th Place, Withdraw was and selver mage ens

past the Os Uteri, in the 16th 16th 16th 16th 16th Operation, not very easy to be pertomated ex

202 fame. Manner, upon [[0:19]]

one Side of the Crotchet -spatial adaption former filide [Sect. 23.] and fix it above bea noise Work powin beath the Chin, in the Mouth, - might brothe significant back Part of the Neck, or butthe production and above the Ears, on in any Part where it will take shillshill but subject this is firm Hold: Then,

17thly, Withdraw the alignment of broughted

and.

18thly, Introduce the and.

both Hands to finish the edit of obligated edited

Delivery is also demand introne than Made Made

The Head being delivered in this Manner, if the Body can't be extracted, without the Danger of leparating the Head from the Body, then you direct in the

gers; then, ... Gland lies; and then,

222dly. Withdraw the and expand the Wings; Hand from within the Va- thengibill bas bus His b. gina, and employ it in the Billy, I pull at the Inpolling the Crochet, while Roument and Head and fo the other is exerted in the deliver the Patient.

16th Place, Introduce retrated sie bymindes) reputie in the every uppline oil the Opdaismoniarized

Right-hand from within with A common about the Womb, and with it must sentiment live the !! take hold of the End or , as die o one compet mide Handle of the Crotchet, od - southward by vide so the insite blad of the Blanc

Left hand to feize the out gard Was atted hanced Bones at the Opening, basilical and to grand size the Ring the diag of the Tothly Pull along with months and there are the

20th Place, That the In this Cafe, Sect 27 Operator fhall introduce and 6thly, I only introduce one Hand fo far as to a Finger to the Opening reach the Shoulder-blades on the upper Perr of the or Breafts with his Fin- Sternum wherethe Thymus

2 ut. With the other santhy adaroduce my Hand conduct along it one Entractor along the Finger of the Crotchets and fix it shat is at the Sternum, per firmly in After which die netrate the Thorax there.

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curved Crochets

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the it must be fixed,

And Almers 1

Hand , Wilde

To fide up one lend anoque soil o'T Head and Weck of the Child's and if Ithe Interior ment given ways T Ar

23dly & Buth in Hareber 10 Hit About sitt up, and dising it again, repeat the littores apply ing Atil higher and higher till the Body is extracted. To blod saids I. Vin Objections to these Man and Man harments thous see in Sect. 26. (4) do rathe ad fair bas J

x Hence it it evidents that my Method only red night Operations, while yours can't be performed with out twenty-three, and many of those too are very pu ful to the Whomap. His advance, you order the Spracture of the Brain, I

be Second Cofe When the Legs or Breech of the Child are brought down, and it is tletained by the Size of the Belly, Sectinggol ods

You order the Belly to In I perform the lame Opebe open'd, by forcing in the Points of the Sciffars; or elfe the Operator may tear it open with the sharp Crochet; both which are naked Inflrements.

sould introduce

ration with my Extract of with Quid's Tereb Occulta, which are each within its Capiula, and thereby perfectly defer from injuring the Woman.

Third Cafe, When the Body and Arms of the Child are extracted and the Head is detained, and if it be impracticable to deliver it fo as to fave the Life of the Child, you order the Operator, Sect. 40.

off, To introduce his main this Cale, if Land the his Fingers thro' the Os that Ease that the Safety

Hand along the Head and Head does not come with Uteri. of the Patient requires af sagn was busy sugar adly sagn warping the Dester

(b) N. B. In these last Operations the Accomeheur's Hand Crochet, and the Neck or shoulders of the Child, are in the Os Externum at the fame Time. the other is exerted in these

amal

adly, To flide up one of the curved Crochets along the Ear betwixt his Hand and the Child's Head. upon the upper Part of which it must be fixed,

adly, He must withdraw his Hand; and,

4thly, Taking hold of the Instrument with one Hand, and with the other and if the Ficad does not here mentioned and the then advance, you order in the

fore, and

othly. To pull up and fix the other curved Crochet, along the oppolite

7thly, Withdrawing his Hand he must join and lock the Crochets; and

Stry, Poll away; stood all and W. And had he but if that will not do, best and has before to

the Intrument, and then and brooders of aller Head from the Body, and an analysis and head Pland pull up the Head vibs with the to into the Uterus, turn the with and all willis Face to the Fundus and month said stead of work the Vertex down to the

er learthing with a Finger ro avoid restinguitte rindom y I would advice, and the Totaleparate with Head from the Body adly To introduce one Hand, suppose the Left, and turn the Head with the Apex to the Osiliteri and Os Externion and therewith holding it fast, II grafping the Neck and 3dly, introducemy Ex-Shoulders, pull along tractor, as in the first Cale

4thly Having broke the Structure of the Brain. I 5th Place, That he in-I of 5thly, Extract the Head troduce his Hand as be holding the Fingers as in the forementioned Cafe I draye directed bro so top inional and by forcing in

the Points of the Britishes; of little. The Closestor that restell openmitch the floor pr Combata both which are naiced Inflruments.

then he must in thela of as of hims visto problem side oth Place, Withdraw togo and about tog Shind Thereduce his we have an illines a mint

Fourth

the Relvis section blove 388 pathly Order an Af Aftant to prefitupour the Woman's Bully with both Hands, to keep the Head and Uterushfinm in that Polition then, mulestille 13thly, The Operator must open the Skull with the Sciffars and western

X Lathly Destroy the Structure of the Brain, as described in the first Case here mentioned; then

and the Withdraw the Sciffars, and

ni en6thly, Introduce and fix the Crochet (which requires at least two Operations) and then,

17thly, Extract it. The Objections to these Sect. 41.

Os International Britis of alial of saint of such sees. the curved Crochets alsoleyan Printy the mildenth dearth, finichilled lead. वीर्वेस्त्राम्या सम्बन्धित श्रिक्तातः tenues, someoft be fixed, ashly, Withoshe other Hand introducer conde of the curved Granns and fix icapon the Lieut Then Eddy. Withderwing the Land that was investiced at -wastal min to shipping mant stand drond does not chief who wilding wine bine ests of the other flant into the Child's Planting he of the Hand or then forthly Pull down with both Litarday, and his char ique then oury county He much inureduce the other Crochet a-Methods may be feen in no ship selloggo and anol the Lead, and thene it

appearing Should hook them Fourth Cafe. When the Head has been separated and left in the Womb, Secto423 you direct the Opea manages at and rator,

ift, To push up his Hand into the Uterus and rator, no tract it thus, then

low down use the For- adly Introduce my b

d topologic

But I advise the Opeto introduce two Fingers . To introduce one into the Child's Mouth, Hand, by which he can with a Thumb below the turn the Apex of the Child's Chin; and if he can't ex- Head to the Center of the Pallage, and hold it there; adly, If the Head be and in sight the

ceps, whose hwest placement or

ceps, but if this also fail, then

adly, Push up a Hand along the Side of the Head till it shall pass the Os Internum, and

Athly, With the other Hand introduce the Side of the curved Crochet and fix it upon the Head: Then,

5thly, Withdrawing the Hand that was introduced, take hold of the Instrument; and then,

6thly, Sliding the Fingers of the other Hand into the Child's Mouth, he

7thly, Pull down with both Hands; and if that fails, then

8thly, He must introduce the other Crochet along the opposite Side of the Head, and fixing it upon the Skull, lock them

Fourth Cafe. When the Heart has then in and left in the Womb, Sector vity that the deliver; but if that can't

diffant to press the Patients Belly with both Hands, and bear all it wibs moving them from Side to -to I on sold awob wal Side, and fqueezing them

traction into the proper Suture, as before directed; eathly. Orden an nods ture of the Brain, to a and in the Meshad before slefortions then, bediral robly. The Operator muft open the Skull with

the Soiflans wand Tathly, Defroy the Supdement the Brain, as deferibed in the first Cafe here mentioned a then muschly, Wichday with

bear, milital a stornive Introduce and fix the Livechet (which requires at least two Operations) and then,

. tythly, Extract ic. The Objections to thefe Methods mby be feen in

rator, the To pull up his But I admit though the 10thly. The Operator bas series I od one basH. mall with map the Child's granger I own souborni on into the Child's Mouth, Equipational line best with a Thumb below the turnbine tehroway of ships Chin , and it he can'rex- Akains ordby Ocyddia'r the trace it thuis, then

Fifth

in fuch a Direction as will force the Head towards the Os Internum and retain it in that Polition; and then it must be opened and extracted according to the Directions given in your Book, Chap. iii. Sect. 7. n. 2. whereby nine other Operations, at leaft, are to be performed; which makes up the Number to twenty.

When the Parts of the Woman are Fifth Cafe. much contracted and swelled while the Child's Head is left in the Uterus, you then order the Operator,

(a) P. a. M.

1st. To introduce one Hand into the Vagina, and if it can't be admitted within the Uterus, introduce the Fingers, and turn the Vertex of the Child's Head to the Os Internum, &c. then

adly, With the other Hand introduce one Blade of the long Forceps along one Ear; then

Withdraw adly. Hand out of the Vagina,

4thly, Introduce the other: and

5thly, Send up the other Blade of the Forceps along the opposite Ear, and lock the two Blades; and then, 6thly,

Foot;

But I direct the fame Method to be followed as in the last Case, as nearly as can be; which will only make four Operations.

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6thly, Withdraw that ba sneeding will some togal Hand ; and sonne to fuch a Linckoels, that a

7thly, Pulling the Head as low as it will come, an Affiftant must hold the Forceps; while, in the

8th Place, the Operator makesa large Opening with his Sciffars; then

othly, Let him fqueeze the Head with great Force and extract flowly.

Hence it is very evident to every judicious and impartial Reader, that your Method of Practice is neither to fafe, eafy, or expeditious as mine: And I have likewife convinced others (fome of whom were your own Pupils) of its superior Advantage by performing Deliveries, after they had tried in vain to extract the Head by following your Directions: And I can very justly declare, that I never yet fail'd in delivering Women with my Extractor, in the Cases above-mentioned.

You fay (a), 'If the Child is seized with Convulfions foon after Delivery, in Consequence of too great ' a Compression of the Head during Labour, and the Veffels of the Navel-String have not been allowed to bleed, the Jugular Vein ought immediately to be opened, and from one to two Ounces of Blood taken way; an Operation easily performed in young Children; the Urine and Meconium must be discharged, and

a small Blister applied between the Scapula.

asinuja.

First, the Opening of the Jugular in new-born Children is rarely practicable, especially in the Case you here mention, because where Children are so large as to be long confined in the Birth, and fo greatly compressed (as you have told us) it is then scarce possible to find and open a Vein in either the Neck, Arm, or Foot; the Membrana Adipofa being filled with Far to such a Thickness, that a Vein cannot be felt underneath it. And, in the next Place, you suppose the Convulsions to arise from the too great and long Compression upon the Child's Head in Labour, whence Obstructions of the smaller Vessels, attended with Inflammations, are caused; and whatever increases the Velocity and Strength of the Circulation, must, instead of lessening, greatly increase the Complaint; wherefore a Blister between the Scapulæ ought, in this Case, never to be applied.

You tell us (b), That the Meconium in new-born Infants ought to be purged off as foon as possible, to empty the Bowels, and to make a Revulsion from the surcharged and compressed Brain. This may be effected by Suppositories, Glysters, repeated Doses of Ol. Amygd. D. mixed with Pulv. Rhabarbari;

This Method of Practice, especially where the Child is either weakly or born before the usual Time of Birth, is what I cannot approve of, altho' countenanced by too common Usage: For my own Reason, confirmed by daily Experience, convinces me, that this Method of Practice ought to give way to the following; whether we consider the Child to be born at, or before the customary Time for Labour.

I mentioned in my Essay on Midwifery (c), That there is a viscous Substance always in the Stomach and small Guts of new-born Infants, which becomes thicker and darker coloured as it descends into the greater Guts, and is there called the Meconium; which is no other than the grosser Parts of the Liquors secreted in the alimentary Tube, and of the Bile and Pancreatic Juice. These Humours, being so thick and viscid, while the digestive Powers of a Child are very weak at Birth, may be of bad Consequence, by sticking to the Guts, obstructing the Lacteals, &c. Hence we see, that to prevent these

(b) P. 437. (c) Sect. 35, 176.

What-Foot; Injuries, the first and principal Indication is to dilute, and the second is to discharge the Contents of the In-

teffines by Stool.

In order to answer the first Intention, the Child should frequently swallow some thin distring Fluid. and the best that I find for this Purpole is pure Whey made from Milk newly taken from the Cow; for, the Collostrum or thickest Part being taken out, the Remainder becomes a thin, nutritious, relaxing Fluid, eafy to digelt, and that will readily mix and circulate with the other animal Fluids, having already passed the small Vessels of the Cow. This Liquid, when warm, is so grateful to the Palate, that the new born Infant will take as great or a greater Quantity than of any other, and very often more, than even of the Mother's Milk; which last will be better or worse according to the State of Health the Woman enjoys, and to the Eafiness or Difficulty of her Labour. The more the Child takes of this Fluid, the thinner wilt be the Meconium, and consequently the easier it will be expelled. If necessary, a little Manna may be diffolved in the Whey to render it more loolening. Hence it is very evident, that whatever either makes the Child take a less Quantity of this diluting Fluid, or increases the Quantity of viscid Humors in the Stomach and Bowels, must be prejudicial.

A new-born Child, even at the regular Time of Birth, and in full Health and Vigour, seldom takes any great Quantity of Liquid at first; because the Stomach and Bowels are already over-loaded by the viscid Matter and Meconium: But when that Part of it which is in the Rectum is discharged, it gives Room for the Descent of what was above it, and so by Degrees the viscid Humors in the Stomach descend into the Intestines: thro' which it is protruded by the peristaltic Motion, which either begins, or however is greatly increased, when the Child begins to breath; and as these Humors descend, caeteris paribus, the Child's Appetite increases lammobds and ar asgnane

What-

Whatever is given to the Child which is difagreesble to its Palate, makes in refrain from endeavouring to take, even what, before, it feemed to be eager after. and confequently it will not drink fuch a fufficient Quantity as Nature requires, and if what is thus given it, should, at the fame Time clog and naudan the Stomach, its Appetite will fall be leffened, while its Aversion to take any Thing will be increased un finne giving it Ol. Amygdi D. mixed with Poly Rhaban harr, Syr. Cichorer com-Rheo, tornate very imphone Things; and especially as some old Wives and Nurles give them, they are often of very bad Confequences for these too frequently give such Things without any Mixture of a thinner Liquid, whereby the Child is almost choaked and often thrown into Fits. Hence it follows that the weaker or more fickly the Child is, the less defirous it is of Nutriment, and confequently Hone of those ologging, disagreeuble Things abovementioned, should be given to it. This Reason is yet Stronger in relation to Children born a Month fix Weeks, or two Months before their regular Time. Because they rarely want to take any Northment mand even then only in small Quantities at once; and yet if the Meconium be not regularly discharged, they fuffer greatly and frequently die, from the repeated Attempts made to give them Oils and Syrups, Ital. Whereas by proper Management they may be often preferved, and the Meconium may be evacuated without those cloging and nauseous Medicines.

For the better understanding of what follows, the Reader must consider what Parts are chiefly employed

in propelling and discharging the Paces.

First then, The Lungs are very materially concerned in this Action, into which the Air must be drawn, and therein confined, while the Patient is thrusting with any Force to expel a viscid Substance.

2dly, That the expulsive Power, catteris panibus, is stronger or weaker, according to the Degree of

Strength in the abdominal Muscles.

38 77

adly,

dig He must remember that Nature is regular in all her Proceedings, and prepares all the animal Organs to be ready for their respective Uses, against the Time they are to be employed a which may be proved by many Inflances. Thus against the proper Time for Birth, the Lungs and Veffels therein contained are proper to bear this Straining; but those of premature Births must consequently be defective, more or less, according to the longer or shorter Time the Child wanted of being nine Months in the Womb. The same holds good also in regard to the Strength of the abdominal Muscles, which consequently must, catetis paribus, be weaker the longer Time the Child vanted of the full Expiration of the usual Term for owerds and offen through offen through

The fame kind of Deficiency must also be in the In-Labout. reftines, whose peristaltic Motion will not be so strong co propel or protrude their Contents, as if the Child was born at its usual Time. Hence it is evident, first, That, as Children, whether born before the usual Term for Habour, or if weakly, the born at the regular Time, in these Cases will take but very little Nourithment, &c. at the Mouth, and so whatever is given todit, at first, ought to be of such a Nature as will dilute, fit easy upon the Stomach, and be palateable, And, secondly, As their Organs are weak or desective, they can't propel and discharge the Fæces, especially if the Stools be hard and viscid: Moreover, every Thing that should strain the Child ought to be avoided. of In these Cases, the following Method I have found to fucceed the best: For I order that the Child shall have nothing given to it but either Woman's Milk, or Whey as above-mentioned, and, if the Cafe require it, fometimes sweeten it with a little Manna. Then, when the Child is dreffed, I order it a Glyster, made with two Parts of Barley Water, or warm Water, and one of Oil of Olives, to be injected into the Rectum by a Syringe with a small Tube at its End. By these Means that Part of the Meconium which lies therein, being

being generally the hardest and most viscid, is soon diluted and discharged : And a Vacancy being made in the Rectum, fuch Parts of the Meconium as lay immediately above the other are the easier protruded and fo are all the rest of the Contents of the Intestines quite up to the Stomach, all which are likewise diluted by what is swallowed down, of which the Child will take a greater Quantity, the less its Stomach is cloged with Oils and Syrups. By the same Method I have recovered Children, after they have had fre-quent returns of Fits.—In both Cases I order'd these Clysters to be repeated every third, fourth, or fifth Flour, or at longer Intervals, as the Urgency of the Case may require. By which Means the Child will take Nourishment often, will be less griped or fick, and will part with more Fæces in any given Time, than by following the other Method, which, I am forry to fay, has been too frequently observed, to

the Destruction of many Lives.

By the Advertisement at the End of your Book, you have published Proposals to print twenty-fix Copper-Places of anatomical Figures and some Instruments; which your Eccho, the Review Writer, mentioned in the Beginning of this Book, Numb. 4. informs us, In Point of Design and anatomical Exactness, be ventures. to pronounce as superior to any Figures of the Kind bitberto made public. How far that Writer understands the Subject, or has feen Women open'd, who have died undelivered in the different Stages of Pregnancy, or at their full Time for Labour, whereby to enable him to make such a Declaration, does not appear; neither can I pretend to judge: But I fancy he has not feen Albinus's Tables, &c. of the Uterus of a Woman who died undelivered, at her full Time for Birth, and was opened by that most accurate Anatomist; who caused Drawings to be taken immediately from Nature, and that too by an able Artist, unalter'd by lying in Spirits or any other Fluid, which would foon make a different Appearance from what is really natural: This Per-

formance

formance I had an Opportunity of comparing with a Cale of the like Kind; and find them exactly agreeing, as to all material Points. And as, the Review Writer infinuates, you have had fuch Opportunities of having Designs taken with such an anatomical Exactnels it is Matter of Amazement to me, that your (pretended anatomical) Description of the Uterus, St. in your Book should be so contradictory to that of Nature; especially as you lay it down for a Rule (4), That every Man-Midwife ought first to be Master of Anatomy: Whence an indifferent Reader will be apt to conclude, either that you have never feen the Cafes mentioned, never accurately observed them, or have taken your Descriptions from very ignorant People. For my own Part, I heartily wish, for the Good of the Public, that what the above-mentioned Writer fays may prove true: But I fear he judges only from a general Knowledge of Things, and from the Beauty of the Drawing; which, indeed may, perhaps, be pollibly superior to any Thing of the Kind bitberto made publie; but that alone will not be sufficient. For, as I observed before (e), It is not the beautiful Drawings of an able Artiff, but the exact Imitation of Nature (altho' by a worse Hand) that is to be regarded. Belides you have made the Tables more expensive than necessary; for you propose to have four Copper-Plates, each of about 18 Inches by 12, to represent Drawings of a few Instruments, which might all be sufficiently shewn and described in one Copper-Place of a less Size

Your Advertisement concludes with a N. B. That you intend to publish a Volume of Cases hereaster; which you tell us (f), Will confist of the most useful Cases and Observations, partly culled from the most approved Authors. But to avoid misleading People, I must recommend it to you, in culling from these Authors, that you will be more particularly careful to re-

(d) P. 446. (e) P. 75. (f) Preface, p. 4.

present their true Meaning, than you have done in regard to the Authors you have quoted in your Book; withe Senfe of whose Words are frequently diametrically appoint to what you have given as a Guide whereby your Pupils were to regulate their Practice. Or if you have employed one Person to make those pretended Extracts (which however by Adoption you have made as your own) as you did, another to draw up your Treatile, either differd him, or lay an Injunction upon him to be more caucious for the future, or elfe you may innocently become inftrumental in the Destruction of many People. For, as you read Lectures in order to inffruct New-beginners, your Errors are thereby propagated; which shews that it is absolutely incumbent upon you to correct them; or whatever fatal Confequences may evenfue, must lay a heavy Burden upon your Conscience with your latter Days. For whoever reads and underflands this Letter, must be convinced, if any Lives are loft by following Methods of Practice laid down in your Book, that you will prove the Author thereof, by propagating them, &c. On the other hand, if I have miftook either the Authors from whom you presend to give Extracts, or your own Meaning, it is a Duty owing to the Public, either to lay them open to the World, or to prove them to be lo to me, and upon Conviction, I promife to publish the Corrections to prevent any Person from being milled thereby: But at present I am quite convinced of the Rectitude of all that I have herein laid down. By these Means I hope to reap the Delight and Benefit of finding my Judgment either confirmed or elfe be fet right and improved; which will be no fmall Satisfaction to To Com and Olympation, A 1 & culled man to that ap-

Hur, to avoid milleaning Leople, I project duragers. - 11 A story and the man Tour bumble Servant, Sing or

J. BURTON.

(3) P. 446. (1) P. 75 " VI English & S. orelene

EXPLA-

## Explanation of the FIGURES in the TABLE.

I G. I. Represents the Fillet on the Whalebone; a, one End thereof, with a Noose to distinguish it from the other End c, that is introduced through the Ring b; dd, the Ends of the Whalebone upon which the Fillet is put.

Fig. II. Is the Form of the Almisdach of Albucasis, with which he crushed and extracted large Heads. N. B. The Misdach was of the same Shape, but not

fo large.

Fig. III. Is the Forfex Albucasis, with Teeth to crush the Child's Head.

Fig. IV. Vertigo Albucasis, with which he opened the Matrix.

Fig. V. Represents the Impellens Albucasis, to push up the Fœtus in the Womb.

Fig. VI. Is the Forma Uncini Albucasis, with only

one Hook.

Fig. VII. Represents the Form of another of Albu-

cafes, with two Hooks.

Fig. VIII. Is Forma Spatumilis Albucasis, being sharp at both Ends for opening the Child's Head, and breaking the Substance of the Brain.

Fig. IX. Is another of the same Persons, for the

like Purpose.

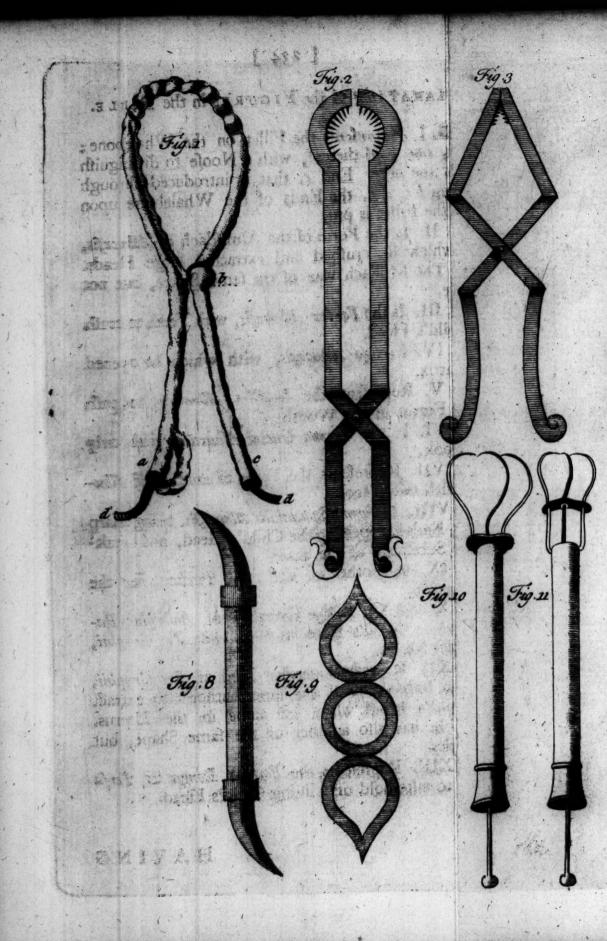
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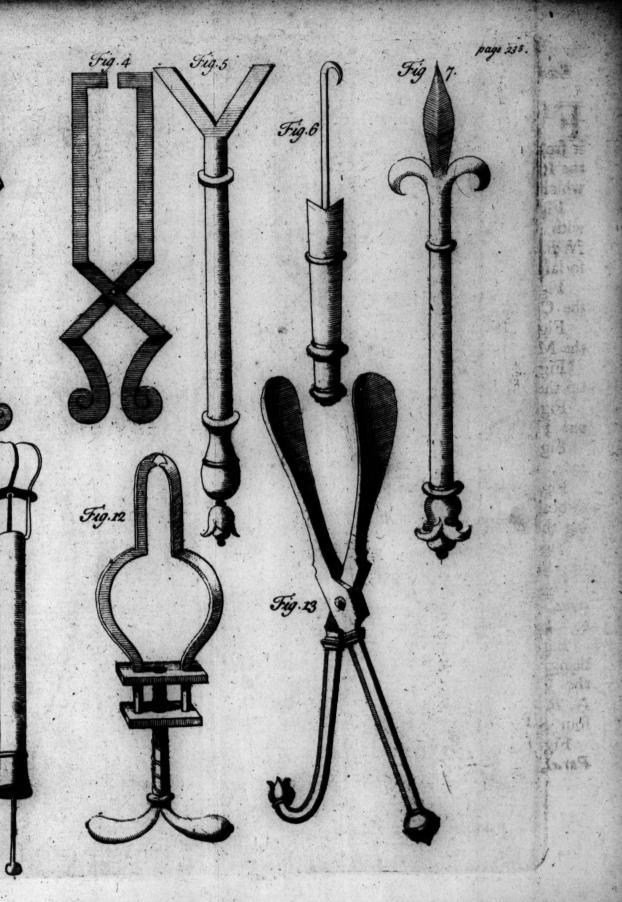
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Fig. X. and XI. Is the Extractor of Ambrofius Paraus, which he calls from its Similitude Pes Grypbii, to extract Moles.

Fig XII. Represents another Kind of Pes Grypbii, being an Instrument of the same Author's to extract the Child's Head when lest alone in the Uterus. N. B. He has also another of the same Shape, but four Sides.

Fig. XIII. Represents the Forceps Longa & Tersa Parei, to take hold of a living Child's Head.





HAVING this Opportunity I could not, in Juffice both to the Public and myself, omit taking some notice of the Cavillings and Misrepresentations wrote against my Essay on Midwisery, by one Kirkpatric an Irishman, and published in (a) the monthly Review for September, 1751, Artic. 33. Which otherways are too inconsiderable to have any such Regard paid to them.

At the first Publication of the Monthly Review the Proprietors thereof presended to give the Reader a very fauthful, candid and impartial Account of the Contents of all new Books and Pamphlets that should be published: And where any thing new appeared therein, to give the Public some Abstracts or Extracts from them, without wresting or altering the true Meaning of the Author, thro' any partial or finister Prejudice. But as they depend upon others to write for them, they, as well as the Public, may often be deceived. One Instance, I think, has been already given in the preceding Letter, in regard to the 61st Article in the Review for December 1751, and in my following Remarks upon the other Article above-mentioned, I believe I shall fully demonstrate the Writer thereof to have been greatly deficient in Candour at least. I must first premise, that these two Articles, tho' both upon the same Subject, were not wrote by the same Person; as an attentive Reader may soon be convinced of by comparing the Style of the one with the other: For Kirkpatrick having retired into the Country for the Recovery of his Health, another Person on that Occasion, which I have from sufficient Authority, was employ'd to write the Article in December 1751.

How far this Kirkpatric may be a Judge of the Subject of my Essay, I can't take upon me to determine; for after the frictest Enquiry, I don't find that

<sup>(</sup>a) The Writer then lodged near the new Church in the Strand; but has fince removed to some other Place.

he either was educated in, or follows the Practice of Midwifery; without which it is impossible to be Masser of the very Elements of the Science, which are the sure Foundation whereon the whole depends: And as an eminent Writer says (b), It is in Criticism, as in all other Sciences and Speculations, one who brings with him any implicit Notions and Observations which he has made in his reading the Authors, will find his own Reflections methodized and explained, and perhaps several little Hints that had passed in his Mind, persected and improved in the Works of a good Critic; whereas one who has not these previous Lights is very often an utter Stranger to what the reads, and apt to put a wrong Interpretation upon it.

Pope (c) gives very good Advice on the like Occa-

fion, for he fays, Van

Be fure yourfelf and your own Reach to know,

How far your Genius, Taste, and Learning go.—

Each might his several Province well command

Would all but stoop to what they understand.—

Without all these before your Eyes,

Cavil you may, but never criticise.

But this Objection, tho' true, I shall yet wave and proceed to shew Kirkpatric's Partiality and want of Candor; sirst observing, that had there been any material Objection either to the Theory or Practice recommended in my Essay, we may reasonably presume, that Writer would have display'd it with all his Rhetoric, without omitting the least Circumstance to prejudice the Reader against it; since he has endeavoured to wrest my Meaning very different from what it manifestly appears to be, and has given false and partial Quotations to support his Attempts, as will be very apparent in the Sequel.

(b) In the Infpett, Numb. 291. 10 V . warsan (-

bes (c) Esfay on Criticism, Lines 48, 49, 66, 67, 123, 124.

to In the Review for Octob. 1750 p. 286. Kirkpatris has laid it down. That we are to judge by that excellent Rule quoted by as from Mr. Pape (d), In every Work, regard the Writer's End. By which Rule I will endeavour to judge of that Writer's End-In the Preface to my Effay (e) I tell the Reader, That I mention my new Improvements in the manner of delivering Women with more Safety, Eafe, and Expedition, in the very worst Cases, than by any other Method; some of which were sent to seso veral of the most eminent in their Profession; whose Approbation induced me to lay them before the Royal Society in London, and the medical Society of & Edinburgh. This Method I took to publish them thro' those Channels, in some measure to stop the Mouths of the ill-natured and flupid Part of Mankind; the first finding fault with any Thing new, altho' ever fo beneficial to their Fellow-creatures, if not invented by themselves; and the latter fort are dife pleased, althor they neither can apprehend the Reafoning, nor understand how to follow the Practice.' In my Dedication, I faid, 'This Method will be a Means of depriving those who abound with Ill-nature. Envy and Detraction, of their most poignant Pleasure; and, at the same Time, will filence, or fop the Mouths of the most ignorant Part of Mankind. who will always find fault with what they do not Sunderstand; when the only Defect is in their own Brains.'- In my Preface I likewise say, Besides the Improvements which I laid before these learned Bodies, there are in this Esfay a great many Remarks and Methods of Practice entirely new, that are founded upon Reason and Experience, which is the furest Foundation in the Practice of all Branches of Phylic. In a thing of this Nature, where the Lives of fo many Persons are daily concerned, an · Author ought to be particularly cautious not to mif-

- · lead People into an Error; therefore whatever I have
- read of, or heard from others, which I thought use-
- ful, I have mentioned; and wherever I deviate, ci-
- ther in Sentiments or Practice, from any Writer or
- · Practitioner, I bumbly offer my Reasons for so doing . to the Consideration of better Judges, being always de-
- firous to be convinced, if I should err, and shall think
- myself obliged to those, who will give themselves the
- Trouble to do it properly, and shall fay with Horace,

## -Si quid novisti rettius istis, Candidus imperti; si non, bis utere mecum,

I then conclude, by informing the Reader, that, To fave Lives, and to avoid many Dangers, is the

chief View of my publishing these Things, amongst

which I am sensible there are yet many Desects.

Hence, I dare fay, the impartial Reader, first, will look upon it rather as a Mark of Modesty than Arrogance, to communicate what I thought Improvements in Midwifery, to those, whom I looked upon as of superior Skill, and undoubted Judgesin this Case. before I made them more public.

2dly. That fo far from endeavouring to deter any proper Judge from criticiling upon my Performance, I defire fuch a Person to point out my Errors, and candidus imperti, for the fake of coming at the Truth.

adly. That it is only proposed to stop the Mouths of those, who have no other Motive to find Fault than their Ill nature, Envy, Detraction, or Ignorance. And,

4thly, That I am fo far from being arrogant, that I

acknowledge there are Defects.

Had I, indeed, boafted of my great Reading of both Antients and Moderns, and of the Thousands of Deliveries, &c. attested only by my own ipse dixi, then that Person might have had some Plea to say, I was arrogant and abounded with vain Exagerations, which his Brother Review-Writer commends Smellie's Book for being free from (f).

<sup>(</sup>f) Vide p. 3 and 4, of this Letter hereto prefixed.

But Kirkpatric says (g), 'This Method of forestal-ing, or even arrogating the Approbation of the Public, in consequence of the Author's averring the

previous Approbation of these learned Societies,

might possibly be intended to deter all medical and obstetrical Critics from the least Censure of a Performance

dignified with fuch a confiderable Sanction; and naturally reminds a Reader of Bay's Epilogue by

Thunder and Lightning.'

Can any candid Reader fay, from my Words abovementioned, that I might possibly intend to deter all medical and obstetrical Critics from the least Censure of my Performance, when I have expressly defired it to be done where any Errors were found? and faid with Horace, Si quid novisti rectius istis, &c. Nay, this is farther explained, by my specifying what fort of People it might deter, viz. fuch as had no other Motive but Ill-nature, Envy and Detraction, or Ignorance: Hence I think it is no Difficulty to judge of this Writer's End. He has endeavoured to prepofes the Reader that what I have faid above is as a Prologue to arrogate the Approbation of the Public; and then lugs in Bay's Epilogue which always follows a Work, as fomething fimilar; this alone, I think, does not flew him to be above the fourth Class of those who call themselves Critics, supposing it to have been wrote by himself's but I own, I rather impute it to the Attempt of one to be witty, who has been upon the Stage endeavouring to be a Player, and confessed that he copied all or Part of that Article for the Press: But the Prologues may be intended to prepoffels the Reader or Audience, Epilogues can't do it.

In my Effay I faid (b), "Having now described the component Parts of the Ovum, the Manner of carrying on the Circulation betwixt the Mother and Foetus, and the Manner of the Child's being nou-

rished in Utero; I hope I may be allowed a small (g) Monthly Review, vol. 5. Sept. 1751. Art. 33. p. 287. (b) P. 18. Sect. 36.

Digression; in order to prove, that the Feetus was always in the Ovum, and never was an Animalcule in Semine Musculino, as Lewenbook, &c. have

vainly imagined.'

Hence an impartial Reader will observe, that what I have said is only by way of a small Digression; and that I only mention this Argument (which I had never observed in any Author) as what occurred to me in my other Enquiries; and will likewise see, that I am not about to give a regular System or History of the Semen Musculinum; or to enlarge my Book with vain Hypotheses.

I then proceed with my Relation and fay, that, In order to fet this in as clear a Light as I could. I

- have been the more particular in my Description of the Ovum, Placenta, Chorion, Amnios, and Um-
- bilical Vessels; by which we find, first, That the
- · Ovum is composed of two Instruments, which af-
- terwards prove to be the Chorion and Amnios. Secondly, On one Side of these Instruments, are a
- Number of small Vessels, which are demonstrated
- to form the Placenta. And, thirdly, It is evident.
- that these Parts of the Ovum are Productions of
- Parts of the Fœtus; all which were united before
- Copulation, while the Ovum was yet in the Ova-
- · rium.
- Now according to Lewenbook's System, the Ani-
  - . How then will be unite the Vessels of the Child with
  - those of the Placenta, &c. and with those of the
  - Chorion and Amnios, which feem Productions of
  - the Cutis and Cuticula of the Fœtus?
  - Let us also consider, that the Circulation in the
  - Animal cannot be performed without a Secretion of
  - what is supposed to be, or is commonly called, the
  - animal Spirits; and that there cannot be this Secre-
  - there not, then, be fomething in Semine Masculino,
  - whose Use is to begin these necessary Motions in the Embryo

Limbryo already placed in the Ovum, until it can have this Sine-qua-non secreted; and also to nourish

and support it, until the Placenta shall adhere to

the Womb? But this Point I shall leave to be discussed by some abler Hand, and return to the Progress of the Embryo in Ovo, whose Placenta had just begun to

adhere to the Fundus Uteri; first observing, that,

was Leuenboek's System true, it would contradict the

well known Maxim that Deus nil frustra creavit.

Hereupon this Review Writer says (i), 'We leave it to the philosophical Reader to determine for himself' (a great Condescension indeed) 'whether these Suggestions sufficiently disprove the Hypothesis of the

Animalcula, or Homunculi in Semine Masculino.

'Tho' we (still in the Royal Style) can imagine some stronger Arguments than our Author's might have

been enforced against it; and indeed he feems conscious of his own being a kind of defective Birth, as he says

he shall leave the Use of the Semen Masculinum to

be discussed by some abler Hand.

First, Every philosophical Reader must be greatly obliged to this Kirkpatric, that he will give him the Liberty to determine for bimself, whether my Argument be sufficient or not.

2dly, Supposing, disputandi gratia, that a Thousand stronger Arguments than mine can be produced, do they invalidate or lessen what I have advanced? But I should be glad to know from that Writer (who insinuates as if he knows more than the rest of Mankind) what stronger Arguments he can produce than ocular Demonstration? By which it is evident, that the Foetus is always in the Ovum.

3dly, He says, 'In leed that I am conscious of my own being a Kind of desective Birch, because I say I shall leave the Use of the Semen Masculinum to be discussed by some abler Hand.' This may be a strong Argument with him, but will have no Weight

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with any Person of Candour who has but a small Capacity. For where is the Conclusion that mine is a defective Birth, because I leave the Use of the Semen Masculinum (which is here a Thing merely specula-

tive? to be discussed by some abler Hand?

But I must observe, in a former Paragraph Kirkpatrie endeavours to represent me as capable of Arrogance, when I would not publish my Improvements
and Discoveries without first communicating them to
several of the most eminent of the Profession, who first approved thereof: And now he infinuates that I am conscious of my Argument being a fort of defettive Birth;
because I leave the Use of the Semen Masculinum to
be discussed by some abler Hand; whereas I make no
Mention of such an useless Speculation, except only in
a small Digression.

In the next Place this Writer says, I affirm that I have laid my Improvements and Discoveries be-

fore the Royal and medical Societies, and the most

eminent Men Midwives in Dublin, who have greatly approved, and highly applauded them; but which

we do not find, upon Enquiry, have been fo uni-

we do not find, upon Enquiry, have been to univerfally admired by the Gentlemen of that Profession

' in London.'

This Paragraph is an equal Proof of Kirkpatric's Good-breeding and Modesty, as well as of his Candour in slily making a false Quotation in order to prejudice his Reader.

For, in the first Place, I said in my Dedication (k),

'That my Improvements had been perused by many
of the most eminent in their Profession.' And in
the Preface (l) I said, 'They had been sent to several
of the most eminent in their Profession in both Kingdoms, whose Approbation induced me to lay them
before those Societies.' As their Letters, most of
which I have yet by me, sufficiently justify. True,
indeed, I did not consult this learned Writer of the

Review, altho' he mentions himself in the Royal Style, in the plural Number; neither cid I communicate the Improvements to ALL the most eminent of their Profession, which that candid Person would infinuate by leaving the Words many and several out of the Quotation, both in the above mentioned Paragraph and in the first of that Article in the Review; which no doubt was done with a Design to make his Reader believe I

had told a Falfity.

2dly, What fort of Persons Kirkpatric pretends to have made bis Enquiry of, I can't tell; but I dety him to mention any one eminent Man, or even one of less Note, who had then followed my Method in the Manner laid down and in the Cafes mentioned, but what must have had the like Success; the Benefit of which I am the more convinced of, by many Cafes which have occur'd fince the Publication of my Esfay, near two Years ago: During which Interval I have been several Times called in, to affift at Labours, where fome of Smellie's Pupils could not perform the Delivery by the Methods laid down by him; which by mine has been foon accomplished to the entire Conviction of those Operators, as well as of others; and so far to their Satisfaction that they now purfue my Directions in all fuch Cases, with the desired Success.

Persons (of whom he says he enquired) had never seen or perused my Instruments; because some Time after the Publication of Smellie's Book (and several Months after the Review for September 1751, was published) that Author wrote to me, to desire my Instrument-maker would work for him; he not being able to have them made, as they should be, by any Workman he could meet with; and, I dare say, Mr. Smellie would apply to as able Hands as any that Kirkpatric's Acquaintance employ'd: And certainly more Accuracy is required in making them right, than every Work-

man is either capable of, or perhaps attends to.

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The next Thing this Writer cavils at, is the Copper-plates, which he finds great Fault with; not because they are wrong and insufficient, but because they are not so beautifully finished as his superior Taste would have had them. Could he indeed have proved the different Situations of the Child in the Womb. &c. attempted to be shewn, were not thence to be learnt, he might then have had some Reason to inform the Public thereof.

In the next Place Kirkpatric seems to be offended at my Style, which I hope he'll allow to be English and may be understood by Englishmen; and then he repeats the last Paragraph of my Esfay. Part of which is as follows, where I tell my Reader that 'I have rather studied the Weight of Matter than elegance of Style; and Usefulness rather than Ornaments, &c. And I can affure him, I should much sooner prefer the Saying of a more eminent Author than he is, who lays it down as a Rule, 'That a Man ought e never to study what he has to fay, but always to write as he talks to his Friend,' than follow any contrary Method recommended by that Writer.

Kirkpatric then proceeds to give the following pretended Quotation from my Book, with his judicious Remarks, where he informs the Reader that I fay, I own I have not compleated the Treatife fo fully as it should be; but yet, I hope, it may be a Means of fourring up some abler Head to finish what I have

begun; as Horace fays upon another Occasion,

-Fungar vice cotis, acutum Reddere quæ ferrum valet exfors sibi secandi.

He, in his usual Style, says, We should, if there had been the least Probability for it, have supposed fibi to have been a typographical Error for ipfa; but the moral Impossibility of a Compositor's lighting upon another Distyllable, which happens to be a Ladellior.

in Word, makes it evident, the Author quoted Horace by Memory, and has made him utter a Line that is neither Senle, Grammar, nor Profody.

In this Paragraph the Remarker lays it down as a moral Impossibility for a Compositor to light upon another Dissyllable, which happens to be a Latin Word: But I would advise this Writer to confult any School-Boy, no farther learned than the Grammar, and he will inform him of a great Number of Distylablles amongst the Latin Words, that might have been lighted upon, as well as fibi! This therefore comes with a worfe Grace from him who fets up for a Judge of

Sense, Grammar and Profody.

Secondly, He fays, 'It is evident the Author quoted · Horace by Memory: But I would be glad to know whence it is fo evident? it does not appear fo from my own Quotation at the Conclusion of my Essay, for there I have shewn I did not quote by Memory only, for after the Word fecandi I have mentioned the Place I took it from in that Author, by adding, Art. Poet. Ver. 304. but this Part of the Quotation the Review Writer omitted, because that would not answer bis End: neither could he then with the least Shew of Justness have pretended to shew his Wit or Sense, and inform the Reader that he understood Grammar and Prosody. Had I even omitted to mention the Number of the Verse in Horace, a candid Reader would have concluded the Error to be merely typographical; especially when he found Horace's Meaning properly applied; which I could not be supposed to do, had I not understood the Words and their Purport; and whether they were Sense, Grammar, or Profody. This Writer may have an Opportunity, in his Review of the preceding Letter (m), with equal Candour, as here, to fhew his Sense and Learning, in a Line quoted by me out of Perfius; where the Compositor, by omitting a single Letter, has divided the

Word infusa into in usa.

Kirkpatric then says, 'This escapes with a worse Grace from a Gentleman, who has often hinted their want of Education to his Brethren; in our Notion of which we generally include fome scholastic or Charle of all property of any or

claffical Literature.

Here again this Writer, to obtain his End, has evidently misapplied the Sense or Meaning of my Words; for I don't in any one Part of my Book, or in the Preface, give the least Hint or find Fault with those, he calls my Brethnen, for want of scholastic or classical Learning; but regret that People (n) ' without any other Education and Capacity, imagine nothing more is required but to hear a few Lectures, and to know the Use (or perhaps Abuse) of a few Instruments, with a Copy of Old-wives Receipts, with which they think themselves qualified to practise as well as others of the Profession. These fort of Men con-Gider Midwifery rather as an Art only than a Science; whereas it may properly be faid to be composed of both: Of the first, as to the Manner of Operation; of the last, as the Mothers are subject to so many Diforders and Complaints, that frequently attend their Pregnancy and Lying-in, which call out for ' medical Skill rather than manual Operation.'

Hence I think the candid Reader will foon perceive. that it is their want of Education (in those whom the Remarker calls my Brethren) as to medical Skill that I regret, because they attempt to practice without any other Foundation than baving heard a few Lectures and baving a few old-wives Receipts in their Possession. And it is very evident, that this medical Skill will never be obtained if they were to read the Classics all their Lives; and therefore it cannot be that Branch which

I could mean to find fault with their want of.

This Writer then proceeds and fays, 'However, we shall not chuse to infer from this heedless Citation, that our Author may not have the requisite Use of his Hands, and be a passable Operator, as he appears to have been an assiduous Practitioner, and has taken great Pains in compiling and composing a Performance, which we cannot think will greatly illuminate or entertain any Adepts in Midwisery; some cautionary Parts of which, however, and some of the Cases, may be worth the Perusal of Beginners.

In the first Place, I can't but observe that I am much obliged to the Moderation of this Person, who is so obliging as not to chuse to infer from (what he is pleased here to call) an heedless Quotation of Horace, that I may not have the requisite Use of my Hands, and he a passable Operator: Because had he made such an Inference, it would have redounded more to his Discredit than mine; but yet it is very plain that he has done this only with an Innuendo to make the inattentive or the injudicious Reader believe he could have made such an Inference, but that he did not indeed chuse to do it.

for his Candour in allowing that I may be a passable Operator, notwithstanding the heedless Quotation abovementioned; but had there been any Connexion betwixt the Practice of Midwifery and Horace's Works, no doubt he would have been glad to have inferred, that I could not be Master of one without understanding the

other.

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3dly, That the Reader may the better judge of the Partiality or Justness of this Reslexion, I must be obliged to repeat here what I have said relating thereto.

In my Preface (0) I said, That 'I intended to pub-

(a) P. 12.

the Royal and Medical Societies; till I was informed that another Person was about to publish my Im-

provements with some other Works of his own; this put me upon publishing them myself, especially

as I had drawn up the Heads of the following

\* Essay for the Instruction of the Son of a Friend and Acquaintance of mine, who was desirous of being

" Master of every Branch of Midwifery."

Hence the candid Reader will conclude that all the rest of the Book, above the Improvements and Difcoveries that I had made, were intended for the In-Bruction of Beginners only; who ought certainly to be Masters of that Part of Anatomy in Women requisite for the Propagation of our Species; and of the regular Progress of each Stage of Pregnancy to the Time of Delivery, in a regular, natural Way. The Knowledge of all these is the Foundation upon which their future Practice must depend; and that they might obtain this End, I have given as full a Description of all those Parts from the most accurate Anatomists as I could. as well as from my own Observations; and also of the Progress of the Foctus to the Time of Delivery in a natural common Labour; in which I have omitted nothing that I thought necessary for a Beginner to know, nor have added any Thing that I judged to be useless, in order to make the Account as perfect and yet in as little Compass as possible. And in order to complete the System, I then tell the Method of delivering Women in all preternatural and difficult Cases; among which are the Improvements and Discoveries which I had made and were never before published; which. fuppoling them just, have an equal Reference to Adepts in Midwifery as well as to others; of which the Reader at one View may fee a Specimen in the foregoing Letter; where, in the Summary, Page 217 to 226, I have set down, in some of the Cases, both Smellie's and my Method of Practice: Whence alone, the candid Reader may judge, whether even Adepts may not

not meet with formething (as Kirkpatric terms it) to illuminate and entertain them? And there are in my Estay other Methods in some Cases not taken notice of in the preceding Letter. Moreover therein are the Discoveries which I had made to prevent or mitigate, some Inflammations of the Womb and After-pains, in a very fafe Manner, with few or no internal Medicines, that were entirely new; and, if true, must equally illuminate and entertain the Adepts as well as Beginners. And fure I am, that whoever follows the Method I have laid down in the fame kind of Cases mentioned, will be convinced of the Truth and Justness thereof; of which I have had repeated Instances since the Publication of my Estay, near two Years ago; which not only confirm my Sentiments, but have also convinced all the others who were present. Yet some People there are in the World, who are too tenacious of their Prejudices, as well as opinionated of their own Skill, to try new Methods; or if perchance they should be prevail'd upon to make the Experiments, they do it in such a Manner as to render the whole ineffectual, either by not following the Method exactly prescribed, or by applying it in improper Cases: So averse are some People against being convinced they are in the wrong, as if it was a Crime to acknowledge they were wifer than before. From what I have faid, I think, everyimpartial Judge will be convinced that Kirkpatric's Remarks are absolutely contrary to Matter of Fact, and may be deemed a false Representation of my Book. To raise every just Objection that can be done, is becoming a Friend to the Public; but to paint Things in falle or worse Colours than they ought to be, is not very candid; and he should, at the same Time. remember, that absolute Perfection is not to be expected from any Work whatever; and that Candour will make Allowances for human Frailties, and overlook any small Errors, which have escaped the Vigilance of an Author. This, perhaps, Kirkpatric will endea-Vour

your to pervert into a Kind of Request, that he would not criticife upon my Work; but fo far from fuch an Intention. I here publicly call upon him to shew. either in my Essay on Midwifery, or in the Letter hereto prefixed, or in this Performance, all the material Faults he can with Candour find out; always giving his Reafons or Authority for fo doing; that I may either as publicly vindicate what I have faid, or acknowledge my Error; which I shall more readily do upon Conviction, than perhaps he imagines: Likewise at the same Time I call upon him, to point out to me any obstetrical Writer down to this Time, whose Treatise is more regularly drawn up for instructing others, that has fewer Faults, or wherein more proper Rules of Practice are laid down, than what are to be found in my Esfay. This indeed I shall not expect to be impartially done, for fince he could, without any perfonal or real Provocation, attempt to stab me in the Dark in so uncandid a Manner as above-mentioned, I now must expect all the Engines, &c. to be play'd against me, that, to speak in the mildest Term, the Want of Candour can suggest. But however, it is to be hoped that what I have faid may be no Hindrance to either any Reply, or future Production of that Writer: who will do well to reflect, that to criticife justly, though, very commendable, is one Thing; but to cavil, make unjust Inferences, and pervert an Author's Meaning, is another.

Reader for detaining him thus long, in answering this Review Writer in so serious a Manner; when, from the Face of his Remarks, he shews his Prejudice and Partiality in so strong a Light, as to deserve rather

Contempt than any particular Reply.

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my Error a which I the It were readily do upon Convidign, that perhaps he contribeted A desirable at the

Page 5, Line 24, for Physic read Physic. P. 11, 1. 32, in use read infusa. L. 35, were read are. P. 17. 1. 12, Manuscripts read Manuscript. P. 27, 1. 26. Imitation read Intimation. P. 35, 1. 34, Pubis read Pubes. L. 39, read Sect. P. 39. 1. 39, Patient read Patients. L. 23, dele not. P. 42, 1. 36, Scrobiculum read Scrobiculus. P. 45, 1, 31, amere read arriere. P. 47, 1. 3, ou read on. L. 16, Guilemene read Guilemau. P. 78, 1. the last, in read into. P. 126, 1. 29, a read the. P. 112, 1 11, after of add the. P. 146, 1. 18, powards read upwards. P. 148, 1. 6, six'd read placed. P. 149, 1. 15, after several add Women. P. 18, delay. read Way. P. 151, before to add not. P. 152, 1. 16. how Readers know read bow Readers may know. Ibid. was read is. P. 153, 1. 16. after or read by. P. 156, 1. 20, i read is. P. 166, 1. 33, tollitus read tollitur. P. 185, 1. the last, or read on.

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